National Library
of Canada

Acquisitions and
Bibliographic Services Branch

395 Wellington Street
Ottawa, Ontario
K1A 0N4

Bibliothèque nationale
du Canada

Direction des acquisitions et
des services bibliographiques

395, rue Wellington
Ottawa (Ontario)
K1A 0N4

Your file Votre référence

Our file Notre référence

NOTICE

The quality of this microform is heavily dependent upon the quality of the original thesis submitted for microfilming. Every effort has been made to ensure the highest quality of reproduction possible.

If pages are missing, contact the university which granted the degree.

Some pages may have indistinct print especially if the original pages were typed with a poor typewriter ribbon or if the university sent us an inferior photocopy.

Reproduction in full or in part of this microform is governed by the Canadian Copyright Act, R.S.C. 1970, c. C-30, and subsequent amendments.

AVIS

La qualité de cette microforme dépend grandement de la qualité de la thèse soumise au microfilmage. Nous avons tout fait pour assurer une qualité supérieure de reproduction.

S'il manque des pages, veuillez communiquer avec l'université qui a conféré le grade.

La qualité d'impression de certaines pages peut laisser à désirer, surtout si les pages originales ont été dactylographiées à l'aide d'un ruban usé ou si l'université nous a fait parvenir une photocopie de qualité inférieure.

La reproduction, même partielle, de cette microforme est soumise à la Loi canadienne sur le droit d'auteur, SRC 1970, c. C-30, et ses amendements subséquents.

Canada

UNIVERSITY OF ALBERTA

FRENCH IMMERSION ATTRITION: IMPLICATIONS FOR MODEL BUILDING

BY

LINDA J. KEEP ©

A thesis submitted to the Faculty of Graduate Studies and Research in partial fulfillment of the requirements for the degree of DOCTOR OF PHILOSOPHY.

DEPARTMENT OF EDUCATIONAL PSYCHOLOGY

EDMONTON, ALBERTA

SPRING 1993

National Library
of Canada

Acquisitions and
Bibliographic Services Branch

395 Wellington Street
Ottawa, Ontario
K1A 0N4

Bibliothèque nationale
du Canada

Direction des acquisitions et
des services bibliographiques

395, rue Wellington
Ottawa (Ontario)
K1A 0N4

Your file Votre référence

Our file Notre référence

The author has granted an irrevocable non-exclusive licence allowing the National Library of Canada to reproduce, loan, distribute or sell copies of his/her thesis by any means and in any form or format, making this thesis available to interested persons.

L'auteur a accordé une licence irrévocable et non exclusive permettant à la Bibliothèque nationale du Canada de reproduire, prêter, distribuer ou vendre des copies de sa thèse de quelque manière et sous quelque forme que ce soit pour mettre des exemplaires de cette thèse à la disposition des personnes intéressées.

The author retains ownership of the copyright in his/her thesis. Neither the thesis nor substantial extracts from it may be printed or otherwise reproduced without his/her permission.

L'auteur conserve la propriété du droit d'auteur qui protège sa thèse. Ni la thèse ni des extraits substantiels de celle-ci ne doivent être imprimés ou autrement reproduits sans son autorisation.

ISBN 0-315-82181-7

Canada

UNIVERSITY OF ALBERTA

RELEASE FORM

NAME OF AUTHOR: Linda J. Keep

TITLE OF THESIS: French Immersion Attrition: Implications for Model Building

DEGREE: Doctor of Philosophy

YEAR THIS DEGREE GRANTED: Spring 1993

Permission is hereby granted to the University of Alberta Library to reproduce single copies of this thesis and to lend or sell such copies for private, scholarly or scientific research purposes only.

The author reserves all other publication and other rights in association with the copyright in the thesis, and except as hereinbefore provided neither the thesis nor any substantial portion thereof may be printed or otherwise reproduced in any material form whatever without the author's prior written permission.

74 Richlyn Estates
52242 Rge. Rd. 223
SHERWOOD PARK, ALBERTA
T8C 1B2

April 23, 1993

UNIVERSITY OF ALBERTA

FACULTY OF GRADUATE STUDIES AND RESEARCH

The undersigned certify that they have read, and recommend to the Faculty of Graduate Studies and Research for acceptance, a thesis entitled FRENCH IMMERSION ATTRITION: IMPLICATIONS FOR MODEL BUILDING submitted by LINDA J. KEEP in partial fulfillment of the requirements for the degree of DOCTOR OF PHILOSOPHY in EDUCATIONAL PSYCHOLOGY.

Charles A. Norman
Dr. Charles A. Norman, Supervisor

Fern Snart
Dr. Fern D. Snart

Claudette Tardif
Dr. Claudette Tardif

Grace Malicky
Dr. Grace Malicky

Ruth Hayden
Dr. Ruth Hayden

Dr. Jim Cummins

April 23, 1993

DEDICATION

To my mother, Jean C. Blom
With Love

Having you for a mom
Was the best beginning
Life could have given me.

ABSTRACT

This study examined the attrition of French Immersion (FI) students, possible reasons for attrition, negative consequences for students, and presented solutions in the form of remedial models. The study consisted of two parts. Part one identified confirmatory data to highlight influencing factors and raise questions with respect to FI attrition. Part one focused on data collected from 37 successful French Immersion (FI) students (completed 10 years of FI), 34 unsuccessful FI students (transferred out by about grade six), and 54 grade one to six students who were currently attending FI. Data from successful and unsuccessful students were contrasted descriptively, and analyses of variance were used where appropriate to determine differentiation between successful and unsuccessful FI students across 12 variables. Grade one to six students were divided into high, average, and low functioning groups and contrasted across 10 variables and five repeated measures. Categorical data (3 variables) from grade one to six FI students were contrasted descriptively and continuous data (seven variables and five repeated measures) were evaluated using analyses of variance. Grade one to six students were evaluated across repeated measures to determine academic gains over one academic year. Interactions of group means and variances across six grades were evaluated to determine whether the FI sample became, on average, higher functioning and homogeneous as students progressed from grades one to six. Part two drew upon the results of part one to discover the current remedial model operating in FI (the child-deficit model). The FI Remedial Model was contrasted with the Cascade Service Delivery Model of the English stream. The negative impact of the FI Remedial Model on FI students, and the role the model plays in FI attrition were described. Three "solutions" in the form of alternative models were explored. A Screening Model and French Cascade Model were generated, the consequences of each model described, and both models were rejected. A Model of Inclusive Education was proposed. Benefits for students and teachers were described. The Model of Inclusive Education was examined in terms of its capacity to counter FI attrition and its associated negative consequences. The primary goal of this study was first and foremost to protect the welfare of the child.

ACKNOWLEDGEMENTS

The committee was selected to cover each area of expertise required in this research project: elementary education, special education, exceptional children, French Immersion, and bilingualism. The thoroughness and professionalism of my examining committee provided an intellectual exercise beyond compare.

To Charles Norman, my mentor and friend, who from chaos created order, and whose encouragement and teachings challenged me to greater intellectual heights. We worked long and hard on this project. I am deeply indebted to his brilliance, insight and patience. This project is as much his as it is mine.

To Claudette Tardif who was first "on board" and witnessed how this project evolved over time. We indeed took a few turns. Je vous remercie pour vos commentaires et votre expertise à propos de l'immersion. Ce projet aurait été moins riche sans vos suggestions.

To Fern Snart whose questions helped prepare me for areas that required more inquiry. You encouraged me to gain a firmer understanding of certain issues and your feedback was most appreciated.

To Ruth Hayden who challenged and helped direct some of the important issues at hand. I am grateful for your thoughtful probings.

To Grace Malicky whose professionalism and thoughtprovoking inquiry kept me on my toes and promoted me to read, and not leave a stone unturned. I am most grateful.

To Jim Cummins whose prominence in the area of bilingual education has made it a privilege and an honor to have him serve as external examiner on this project. Your questions and comments were most appreciated.

Recognition and thanks are also extended to all the teachers who gave of their time to provide testing, marking, tally and survey sheets. Your help and support were most appreciated.

Finally, to all the students who participated in the study. This study would not have been possible without your participation. I thank each and every one of you. It is afterall for you that this research project was undertaken.

Professional guidance and support has a strong hand in a project such as this, but personal support is equally deserving of mention. Without support at a personal level, the professional level is not at liberty to develop.

To my mother, Jean C. Blom, who was always available to care for the children, lend a helping hand when it was needed most, and listen empathetically when I needed to unburden. You epitomize "mother" in the best sense of the word, and I aspire to be as good a mother to my children as you have been to me. I am truly blessed to have a mother like you. Your help with the children and with household tasks unburdened my load tremendously and enabled the completion of this project. Thank-you, Mom. I love you.

To my children, Kyle and Landon, who for the past three years have lived with a mother who was always in a hurry, worked strange hours, who sometimes could not offer as much time as she would have liked, and who became short tempered rather easily. I love you both dearly and want the best for you. Hopefully, I have provided a good model of what hard work can bring. Even in light of difficulties endured, there are many rewards. I am certain that you will feel the pressure is off as much as I. We will now have time for play, games, and fun.

To Stephen, my husband...it is time to get reacquainted.

TABLE OF CONTENTS

CHAPTER PAGE

I INTRODUCTION 1

Background for this Study 1

Trends in French Immersion 6

A Personal Basis for the Study 10

II REVIEW OF RELEVANT LITERATURE 17

Organization of this Chapter 17

French Immersion 17

Description of French Immersion 17

Variations of Immersion Programs 24

Contrast With Francophone and FSL Programs 29

Within-Child Variables 35

External Variables 44

Remedial Decision Making Criteria 49

Reasons for Attrition 51

Chapter Summary 57

Research Questions 60

III METHODS AND PROCEDURES 61

Study Overview 61

Part One: Differentiating Levels of FI Functioning.. 62

Subjects 62

Variables and Tests Used 64

Procedure 73

Design and Analysis 75

Predicted Outcomes 79

Limitations and Implications 79

CHAPTER PAGE

Part Two: Learning and Remedial Decision Models 81
  Procedure and Design 81
  Predicted Outcomes 82
  Limitations and Implications 83

IV PART ONE: RESULTS AND DISCUSSION 84
Demographic Characteristics 84
  Characteristics of the Successful Group 84
  Characteristics of the Unsuccessful Group 91
  Characteristics of the Grade 1 to 6 Sample 100
Analysis 108
  Research Questions and Findings 108
  Research Question I 108
  Research Question II 114
  Research Question III 115
  Research Question IV 118
  Research Question V 123

V PART TWO: IMPLICATIONS FOR MODEL BUILDING........... 131
English and FI Educational Models 134
  Selectivity 134
  Second Language as the Vehicle for Learning ... 136
  Two Additional FI Goals 137
  Special Education Models 137
    English Special Education Model 137
    FI Special Education Model 139
    Similarities & Differences Highlighted ... 143

CHAPTER PAGE

Consequences of Special Education 145

Consequences of Special Education in General .. 145

Consequences of the FI Remedial Model 148

Consequence of Elitism 150

Where Do We Go From Here? Solutions 152

Model One: Screening 153

Model Two: French Cascade Model 163

Model Three: Model of Inclusive Education 171

Historical Evolution 173

Core Components 174

Guidelines to Implement Inclusive Educ.... 178

Model of Inclusive Education 182

Benefits of Inclusive Education 190

Final Words 194

VI DISCUSSION OF THE RESULTS 198

The Problem Reiterated 198

Comparison of Results With Respect to the Data 200

Comparison of Results With Respect to the Models ... 209

Model Building: Solutions 211

Difficulties With Respect to Implementation 220

Bicultural and Bilingual Considerations 222

Limitations of the Study 223

Implications for Future Research 224

References 226

CHAPTER PAGE

Appendix A: Teacher Letter: Conversion of Letter Grades.. 137

Appendix B: Demographic Questionnaire 238

Appendix C: Child-Deficit Model 239

LIST OF TABLES

TABLE PAGE

1: Sample Selection of Grade One To Six Students 64

2: Conversion of Letter Grades to Stanine Scores 70

3: One-By-Three Between Group Design, 12 Variables ... 77

4: Successful Students By Grade and Gender 85

5: Successful Students By French Spoken At Home/French Origin 86

6: Successful Students By Incidence of Psychoeducational Assessment and Reason for Assessment 87

7: Successful Students By Cognitive Processing Weaknesses 88

8: Successful Students By Help Received 89

9: Mean Verbal and Nonverbal I.Q. for Successful Students 90

10: Successful Students By Achievement Grades 91

11: Unsuccessful Students By Exit Grade 92

12: Unsuccessful Students By Gender 92

13: Unsuccessful Students By French Spoken At Home 93

14: Unsuccessful Students By French Origin 94

15: Unsuccessful Students By Incidence of Psychoeducational Assessment and Reason for Assessment 95

16: Unsuccessful Students By Cognitive Processing Weaknesses 96

17: Unsuccessful Students By Help Received 97

TABLE PAGE

18: Mean Verbal and Nonverbal I.Q. for Unsuccessful Students 98

19: Unsuccessful Students By Achievement in French and English 99

20: Academic Achievement Compared With Processing Weaknesses 100

21: Grade One To Six Students By Grade 101

22: Grade One To Six Students By Gender 101

23: Mean Age By Grade for the Grade One To Six Students 102

24: Grade One To Six Students By French Spoken At Home/French Origin 103

25: Grade One To Six Students By Incidence of Psychoeducational Assessment 103

26: Grade One To Six Students By Cognitive Processing Weaknesses 104

27: Grade One To Six Students By Help Received 105

28: Mean Verbal And Nonverbal I.Q. For Grade One To Six Students 107

29: Grade One To Six Students By Achievement Grades ... 108

30: One way ANOVA of Successful and Unsuccessful I.Q. Means 109

31: Successful and Unsuccessful Students By Cognitive Weaknesses 110

TABLE PAGE

32: Successful and Unsuccessful FI Students By Incidence of Assessment and Reason for Assessment 111

33: Successful and Unsuccessful Students By Help Received 112

34: Successful and Unsuccessful Students By French and English 113

35: Cell Means for High, Average, and Low Functioning FI Students Across 12 Variables (Includes Five Pretests) - 12 One Way ANOVAs 115

36: Cell Means for High, Average, and Low Functioning FI Students - Two Way ANOVA With Repeated Measures 116

37: Group Means of High, Average, and Low Functioning FI Students Across 12 Variables (Includes Five Posttest Scores) - Two Way ANOVA ... 120

38: Comparisons of High Functioning Grade One To Six FI Students and Successful FI Students 125

39: Comparisons of Low Functioning Grade One To Six FI Students and Unsuccessful FI Students 129

LIST OF FIGURES

FIGURE PAGE

1: French Immersion Attrition Rates in Alberta from 1983 to 1991 9

2: Intervention Model in a Local School District 133

3: Cascade Service Delivery Model 138

4: FI Remedial Model (Truncated Cascade With Two Additional Options) 141

5: French Immersion Remedial Decision Making Model 141

6: Graphic Representation of Model One: Screening 155

7: Graphic Representation of Model 2: French Cascade Model 166

8: System of Supports 181

9: Model of Inclusive Education 184

I. INTRODUCTION

Background For This Study

Canada has two official languages, French and English. English is the main language spoken in eight provinces and two territories. French is predominant within the province of Quebec. New Brunswick is unique in having maintained a French-English population balance and, consequently, is Canada's only officially bilingual province (Tarnopolsky & Beaudoin, 1982). The Official Languages Act of 1969 (revised in 1988) inspired s. 16(1) of the Canadian Charter of Rights and Freedoms (part one of the Canadian Constitution Act of 1982) and ratifies a formal, or constitutional, level of bilingualism. Section 16(1) of the Charter states, "English and French are the official languages of Canada and have equality of status and equal rights and privileges as to their use in all institutions of the Parliament and government of Canada" (Tarnopolsky & Beaudoin, 1982, p. 446). An operational level of bilingualism, of which education is one example, also exists and is legislated at the provincial level.

In Alberta, English is clearly mandated at the school level (Government of Alberta, 1988), and French is conditionally provided to Francophones who meet the restrictive criteria set out in s. 23 of the Charter (Julien, 1991; Tarnopolsky & Beaudoin, 1982). Education in their first language is a right of Franco-Albertans, and French is provided to non-Francophone students at the discretion of individual school boards (Government of Alberta, 1988). The

Language Education Policy for Alberta (1988) plainly states, "Alberta Education encourages opportunities for all Alberta students to learn French by making available programs and services for French immersion and French second language courses" (Government of Alberta, 1988, p. 14). Whereas the Charter supports two viable languages at the formal level, mere "encouragement" supports one of Canada's official languages for the majority of Albertans at the educational level. An exception through the Charter is the provision made to French-English minorities outside their respective regions of majority. French-English minorities have a legal right to education in their first language if numbers warrant. At the educational level in Alberta, it is clear that French has optional or conditional status, whereas the English language is viable and mandated.

Therefore, in Canada, French-English bilingualism may be conceptualized at two levels. At a formal, or constitutional level, bilingualism refers to the recognition of French and English as two viable languages in the government and parliament of Canada, and ensures that government and parliamentary services be provided to individuals in either of the two official languages. At an operational level, of which education is one example, French-English bilingualism consists of one conditional or optional language, and one mandated and viable language. For the English majority in English Canada, English education is mandatory whereas French education is optional or conditional. In French Canada (Quebec), the situation is parallel, but the language roles are reversed: French education is mandated and English education is offered conditionally to those who qualify under s. 23 of the Charter, or optionally to the majority of Quebecois. Exceptions to this legislated rule exist. For example, English as a Second Language has been provincially mandated in Quebec. As long as constitutional rights are observed, provincial governments have legislation to make changes in educational practice if they so desire.

Bilingualism at either the constitutional or educational level, does not translate into "compulsory individual bilingualism" (John Turner, cited by Cowan, 1991, p. 6). Canada is more aptly described as a country "with two official languages" (Cowan, 1991, p. 6) rather than as a country in which bilingualism is personal and universal. The Alberta premier, Don Getty, claimed French was forced on Albertans (cited in the Edmonton Journal, January 10, 1992); however, Victor Goldbloom, the Commissioner of Official Languages, countered these statements. He stated, "Only 400 of the 13,000 federal civil servants working in Alberta are required to be bilingual to provide service to Francophones [three percent]. Only 105 of the 2,000 RCMP officers and constables in Alberta are required to be bilingual for the same reason [five percent]" (Editorial, Edmonton Journal, February 1, 1992, p. A6). These and other facts were presented to dispel the myth of universal and forced bilingualism. In Alberta, forced bilingualism is nonexistent. What exists instead is a Canadian language contradiction: the contradiction that exists between the philosophy of two viable languages at one level, and the operational reality of one viable and one optional language (for the majority of Albertans) at another level. Optional status at the education level results in the discretionary treatment of bilingual education programs by individual school boards and, in this writer's professional opinion, facilitates the entry and exit of students into and out of French-English education programs.

When a French-English educational program is elective (not obligatory), or the choice to participate optional, the program is easily entered and may just as easily be exited should poor performance occur. Optional status, consequently, influences attrition from such programs. Moreover, it merits emphasis that the optional status of bilingual programs, such as French Immersion (FI), is distinct from that of other "optional programs." Traditionally, optional programs have been skill or subject specific, such as band, hockey, football, and drama (Alberta Education, 1990). A traditional option frequently involves a stringent selection process based on skill and competition, whereas a bilingual optional program is open-door and unselected (all students have equal right of entry and a right to reasonable expectations of success).

French Immersion is an anomaly with respect to optional programs in that FI is comprised of a complete curriculum whose stated goal is academic-cognitive development and mastery of academic skills equivalent to those of the regular

English stream (Alberta Education, 1987b; Genesee, 1987). French Immersion is recognized as a regular (not an enrichment) program (Genesee, 1987) whose primary difference from the English regular program is that learning occurs through a second language. Yet, whereas the English program is mandated and fully accountable to its students, FI is optional. An open-door policy of unselected students implies the program is similar to that of the English stream and is equally accessible to all students. In reality, many students enter FI, but many students exit the program as well. This has unique and hidden repercussions for FI students.

Students in FI merit comparable rights to students in English education. A humane (compassionate) position, or rather a position that aligns itself with humanism (concern for human interests), would suggest that students receive comparable support in either educational stream; however, there is not equality. There is a hidden selection process in FI which leads to a type of elitism. This hidden selection process merits recognition and examination. There are many casualties of the program (vast attrition of students and resulting negative consequences) partly as a result of this hidden selection process.

This writer's professional perspective is that FI is a viable educational program and FI students merit opportunities equivalent to those of English stream students. This perspective is supported in the literature (Bruck, 1985a; 1985b; Safty, 1989). My primary motivation, however, is not that FI as an educational program should prevail, but that students whose welfare is placed in a failure situation (through exit as opposed to the remediation of skills) be preemptive (warrant primary obligation).

The absence of intensive special education services to remediate academic deficiencies in FI is an example of the inequality that exists between FI and regular English education, and is one factor involved in the hidden selection process. The absence of intensive remediation and the evaluation and subsequent removal of a student from FI perpetuates the child-deficit model (blaming the child for deficiencies). Because of the widespread popularity of FI and the overwhelming problem of attrition, these problems and the hidden selection process affect a great many students and warrant study.

Trends in French Immersion

French Immersion has been increasing in demand by parents across Canada. Canadian Parents for French (CPF), founded in 1977 by a small group of English-speaking parents dedicated to the advancement of FI and other French education programs, currently has almost 200 Chapters with over 18,000 active members (MacIsaac, 1990; Sloan, 1989). French Immersion enrolments climbed from 37,385 in 1978 to almost 225,000 across 1642 schools in 1988 (Sloan, 1989). At a national level, this reflects an increase in excess of 600 percent over a 10-year period. By 1990-91, Canadian FI enrolment rates exceeded 288,000 (MacIsaac, 1991).

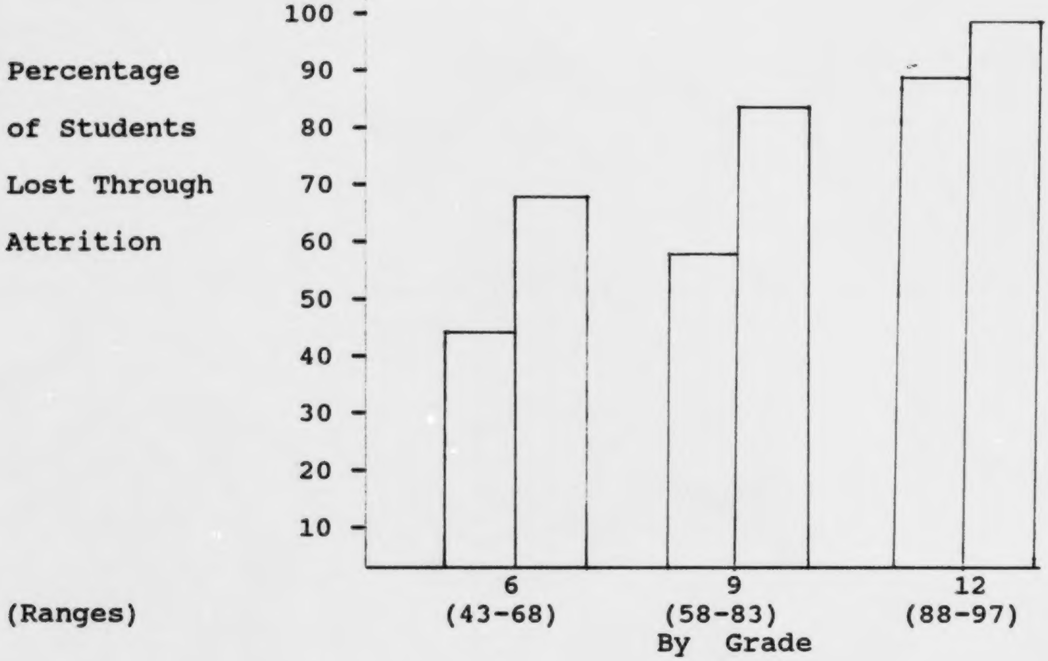
Provincially, FI is offered by 174 schools across 40 Alberta school districts (A. Nogue, Language Services Branch, personal communication, February 19, 1991). Alberta enrolments increased from 15,731 in 1983-84 to 27,397 in 1989-90, which reflects a 57 percent increase over a six year period (Alberta Education, 1990). On the surface it appears that FI is in strong demand and doing well both nationally and provincially. Nevertheless, two additional trends indicate that problems exist.

The first trend involves Early Childhood Services (ECS) enrolments in FI. Increases in total FI enrolments cited above occurred largely as a result of initial ECS popularity. For example, from 1983-84 to 1990-91 ECS enrolments in FI increased 79 percent in comparison with an increase of 26 percent in grade 12 FI enrolments over this same period (Alberta Education, 1990). French Immersion students at the ECS level have outnumbered grade 12 students by almost ten to one; however, a recent trend now reveals declines in ECS enrolments in FI, the first recorded since FI's implementation in Alberta. In 1989, Alberta ECS enrolments in FI dropped to 3984 from a peak of 4259 in 1988 (Alberta Education, 1990). French Immersion enrolments at the ECS level dropped further in 1990-91 (to 3589). A 16 percent decline in ECS enrolments took place over this two-year period. According to this trend, fewer students are entering the FI program, which implies that fewer parents are selecting FI for their children. By contrast, "ECS enrolments in Alberta public and separate schools has increased steadily since 1973-74" (Alberta Education, 1989, p. 14). In the English stream, ECS enrolments have continued to reflect "spectacular growth."

A second trend of specific concern to this study is attrition. While many students enter FI at the ECS level, relatively few students remain in FI as they progress from ECS to grade 12 (Figure 1). Provincial attrition rates for the period of 1983 to 1991 ranged from 43 to 68 percent by grade six, 58 to 83 percent by grade nine, and by grade 12 provincial attrition rates reflected a loss of 88 to 97 percent of the FI student population (Alberta Education, 1990). Students still enroled in a single FI course by grade 12 ranged from three to twelve percent from 1983 to 1991. By contrast, Alberta's public, separate and private school drop-out rates ranged from 12.4 percent in 1978-79 to 8.3 percent in 1987-88 (Alberta Education, 1989). The attrition of FI students is endemic. Both trends are documented at the local level.

At the local level, the first trend, recent FI ECS enrolment declines, was documented by a local public school system when, in 1990, school officials reported the district's first ECS enrolment declines since the introduction of FI in 1979. Registration of 67 ECS students reflected a decline of 18 percent from the preceding year. In the separate school district, which serves the Roman Catholic community of the same area, ECS enrolment rates of 36 for the 1990-91 academic year reflected a drop of almost 50 percent from previous

Figure 1. French Immersion attrition rates in Alberta from 1983 to 1991.



years. The 1990 ECS decline in the separate school district was the first documented in this school system.

The second trend, attrition of FI students from ECS to grade 12, is reflected at the local level as well. Similar to provincial findings in Alberta, the first major enrolment declines in the separate school district occurred by grade six. Although both trends are deserving of investigation, this study will investigate the second trend: the high rate of attrition from FI. Factors perceived to influence FI attrition will be investigated, and the problem of FI attrition will be examined. Once the factors influencing FI attrition have been identified, solutions to perceived problems will be offered. The search for solutions will lead to an examination of the remedial model operating in FI. Alternative models will be generated, and model building and solutions proposed.

A Personal Basis for the Study

As a school psychologist involved in psychoeducational assessment, counselling, and consulting at the school level, I became increasingly concerned by the number of FI student referrals, by the number of students who transferred out of FI after much frustration and failure, by the fact that there were no criteria available to assist with remedial decisions and, finally, that FI remedial alternatives were severely limited. My professional responsibility was to each child and my course of action was to provide the academic support and direction that would best benefit each child.

Although self-esteem, frustration, and distress levels of students, parents, and teachers were not measured by a standardized instrument, it was my professional perception that referred students and their parents and teachers were invariably frustrated and distressed to a greater degree than observed in comparable situations in the English stream. Comparable distress levels would have been expected across remedial situations. My perceptions supported similar findings in the literature (Bruck, 1985b; Cummins, 1984; Safty, 1989).

Few solutions are currently available to remedy problems, intensive remediation is unavailable in FI, and students seem destined to fail or, as a solution, drop-out of FI, which presents additional negative consequences. These represent situations which could lead to heightened distress levels.

Distress could occur as a result of the situation being perceived as hopeless (not able to be remediated), or perhaps is fuelled by the emotion of parents, teachers, peers, or the student him- or herself. The reasons for heightened distress are unclear; however, certain implications of academic failure that distinguished the FI and English streams are readily identified. For example, at times FI is offered in an immersion centre; therefore, in these instances exit from FI also frequently means transfer to a different school. Consequently, the loss of friends, familiar busing routines, and academic setting contribute to a major readjustment for students. Although many FI programs are housed within English schools, the current study involves students in an immersion center.

It was also my perception that "drop-out from FI" was often viewed as an indication of failure. Moreover, failure was not specific to one skill or subject area, but to a broad curriculum of skill and subject areas. The French-English issue also carried political overtones. Any one of these factors may have increased student, parent, and teacher distress. It was my perspective that negative consequences as a result of failure in FI and drop-out also served to compound the negative consequences of special education in general (see chapter five).

The literature reports similar negative consequences of drop-out. With drop-out comes negative labelling, low self-esteem, loss of French skills, and other negative ramifications such as being academically further behind in English due to having received little or no formal instruction, particularly in the lower grades, which further impacts on self-esteem and a sense of failure (Bruck, 1978; 1979; 1980; Cummins, 1984; Safty, 1989). Moreover, FI students who drop-out experience frustration and unhappiness which is attributed to the frequent need for students to repeat a grade, the tendency to view the English stream as lower status, or as a demotion, and having to meet continued academic demands in the face of low self-esteem resulting from these failure experiences (Cummins, 1984).

Parents of FI students seem to have high expectations and standards for their children. Through personal communication, many parents indicated they hoped bilingualism would give their children academic and economic advantages. Parents were also proud of their children's early attempts at bilingualism. Parental statements seemed to suggest feelings of status and prestige. Academic difficulties likely thwarted parental hopes and expectations, which may have contributed to parental distress. The frustration, failure, and drop-out of FI students also occurs quite quickly in FI, frequently by grade two. The brisk pace of the process might create a sudden crisis to which many parents may have a difficult time adjusting. Moreover, parents often blame themselves for their children's difficulties. Parents questioned whether they had chosen the wrong program, or stated that if they had had knowledge of the French language, they may have been able to provide their children with greater assistance, or might have perceived and intervened in their children's difficulties at an earlier time. Any number of these factors could have contributed to parental distress.

These perceptions were largely supported in the literature. Economic advantage was reported in the research literature as a primary parental goal for seeking a bilingual education for their children (Genesee, 1987). Parental helplessness in FI was also reported in the literature (Gibson, 1984; Hayden, 1988; Lambert & Tucker, 1972).

Teachers in FI consistently questioned whether academic difficulties experienced by referred students were due to program, student, other variables, or a combination of variables. Teachers questioned the suitability of students for FI and asked, "Should the student remain in FI or be transferred out?" (In contrast, this question is rarely asked of regular students by regular English stream teachers.) Feelings of helplessness and frustration seemed evident. Cummins (1984) states, "the issue of concern should change from 'Are French immersion programmes suitable for the language impaired, learning disabled, or low-IQ child?' to 'How can French immersion programmes be made more suitable for these children?'"

When referred students required more intensive and prolonged special education services to remediate academic skills, these services were unavailable in FI. Students were readily transferred out of FI to access English special education programs. Problems at each of three levels (student, parent, and teacher) and the lack of solutions or viable alternatives to perceived problems led to this experientially generated study.

Two distinct groups of professionals were informally interviewed to discover whether solutions might be readily available. I spoke with six FI consultants in the Edmonton area (one known to me and employed by the same school district, the remaining five from Alberta Education or an outside school system). Four of the consultants expressed the belief that students should remain in FI despite academic difficulty. Two consultants favored a transfer out of the program, voicing the belief that FI may not be equally suited to all students.

I then spoke with five school psychologists. Each colleague was known to me and most came from the same school district. Each claimed to feel unqualified to make remedial and transfer decisions in the FI area due to an absence of criteria on which to base decisions, and each also felt disadvantaged due to his or her unilingual status. Language issues were reportedly subtly avoided, and referrals were treated as if difficulties were consistent with those presented in the English stream.

Opinions derived from the above interviews belong to these individuals alone and do not necessarily reflect the perspectives of their respective professions. That these interviews did not provide readily available solutions confirmed the need for further research in this area. Currently, professional "best guesses" are being employed with respect to the handling of educational problems in FI, and FI attrition with its ensuing negative consequences continues. Genesee (1987) reiterated and confirmed my concerns, as noted in the following quote which served as an articulation of similar concerns.

> *It is imperative that educational decisions concerning exclusion of subgroups of students from immersion be founded on systematic and objective investigation, and not on speculation or "common sense."* (Genesee, 1987, p. 78)

Research is, consequently, required to discover and confirm what is in fact occurring in FI and what variables are influencing the high rate of attrition from FI. Research necessitates an investigation into FI, into a differentiation of students who remain in FI from those who leave the program, and into FI students who are perceived to function differently in the program. Confirmation of the model of learning operating in FI is needed, and the remedial model that arises from the learning model needs to be generated. Through an exploration of the hidden selection process and the consequences of FI failure and attrition, it is anticipated that solutions may be derived. Based upon these results, an attempt to generate possible solutions to identified problems is anticipated. Solutions in the form of alternative models will be generated, the pros and cons of adopting each model will be discussed, and guidelines for implementation of the selected model will be presented.

Chapter 2 will begin the literature review with a cursory description of FI: its goals and methods, program variations, and distinctiveness from other French education programs. Within-child variables and variables external to the child will be reviewed in terms of their relationship to FI academic performance. Criteria cited in FI remedial decisions will be discussed, reasons for attrition cited in the literature will be reviewed, and research questions will be posed.

Chapter 3 will describe the methods and procedures that govern this entire project including part one and part two. Chapter 4 will provide the results and discussion from part one of the study.

Chapter 5 will use the results from part one of the study as a starting point from which to begin an evaluation of the FI model. Part one data and the existing FI remedial procedures will reveal the remedial model operating in FI. An understanding of the FI Remedial Model will be developed through a contrast with the English Cascade Service Delivery Model. The factors involved in FI attrition and the negative impact on students will be explored. Solutions in the form of alternative models will be generated, the pros and cons of adopting each model will be discussed, and guidelines for implementation of the selected model presented. Chapter 6 will present a discussion of the results.

II. REVIEW OF RELEVANT LITERATURE

Organization of This Chapter

The literature review in this chapter will be divided into seven sections which will include the following areas.

Section A describes FI, its characteristics, variations, and distinctiveness from Francophone and French as a Second Language (FSL) programs.

Section B reviews within-child variables relevant to FI academic performance.

Section C describes external variables relevant to FI academic performance.

Section D discusses criteria cited in FI remedial decisions.

Section E reviews reasons cited for attrition from FI.

Section F provides a summary of Chapter II and discusses the implications of literature findings for the current study.

Section G states the research questions relevant to the study.

A. French Immersion (FI)

The following section will provide a description of FI, its curriculum goals and methods, partial and total variations of the program, and its distinctiveness from Francophone and FSL programs. Falsely perceived as "for the French," FI is designed for Anglophones (Olson, 1983).

Description of French Immersion

Fundamentally, FI is an academic program (Alberta Education, 1987b; Genesee, 1987). Its primary goal is academic-cognitive development and its mandate is to achieve and maintain academic levels and master the same curriculum as students in the regular English program (Alberta Education, 1987b; 1990; Genesee, 1987). French language competence is a secondary goal of FI. With the exception of an English language arts component that begins generally in grade two or three, French is the exclusive language for academic instruction at the elementary level. At the junior high level the French-English ratio is more balanced and varies dependent upon which variation of FI (partial or total) is taught. High school FI is restricted by the number of FI courses taught at the local high school. Course availability could conceivably range from none to a maximum of five courses over three years (Langue et Littérature 10, 20, 30 and Études Sociales 10, 20) (Alberta Education, 1990; Panzeri, 1988). French is learned through "meaningful, interactive situations" (Genesee, 1987, p. 26), sustained exposure to, and instruction in French; hence, through immersion.

French Immersion is an "additive bilingual" program. That is, the second language is "learned by choice and, consequently, the first language is not threatened by acquisition of the second language" (Genesee, 1987, p. 41). Proficiency in both first and second languages is actively pursued (Alberta Education, 1987b; Government of Alberta, 1988).

The goals of FI are to maintain parity with English students on measures of English language competence, academic skills, and appreciation of one's cultural distinctiveness, while simultaneously striving for appreciation of the minority cultural group and competence in the use of the minority language (Alberta Education, 1987b; Genesee, 1983; Government of Alberta, 1988).

The FI curriculum guide, "Le français à l'élémentaire: Programme d'études," explicitly states FI goals (Alberta Education, 1987b). These goals specify French language competence (oral and written comprehension and production) that enables students to: (a) master and understand their human and physical environments, (b) increase cognitive thought processes to progressively higher levels, (c) enhance cognitive capacity to handle problems of nature with varied complexities and promote the potential discovery of solutions, and (d) sensitize students to diverse socio-cultural values which require the positioning of oneself in consideration of these values. Thus, essential goals of FI include developing cognitive and academic skills, communication skills, and developing a sensitization toward socio-cultural values of one's culture and the culture of the second language community.

Methods to operationalize these goals include the use of teachers as unilingual models, maximum use of the French language, minimal error correction (so as not to inhibit communication attempts in the second language), and permission for students to use both languages in the initial phase of second language acquisition and among themselves outside of the classroom (Genesee, 1983; 1987; Lyster, 1987). Since students do not have the French language background, teachers draw on children's personal experiences and employ teaching strategies that rely on games, fun, and repetition to elicit and promote oral and listening skills (Tardif & Weber, 1987). By grade one, French is expected almost exclusively in the classroom. Skills are taught in an integrative, holistic fashion which emphasizes context and inference rather than discrete terminology, emphasizes forming the relationship between language and thought, and fosters application to real life situations. Second language learning in FI relies largely on the inferential skills of students and the creative communicative skills of the teacher.

Whereas students are exposed to a French unilingual setting within the classroom, the second language environment has been artificially created within a predominantly English cultural milieu. This fact is perceived to inhibit French acquisition skills and produce an "interlanguage" (Lyster, 1987; Stern, Swain & McLean, 1976), an "artificial language riddled with errors" (Bibeau, 1984), "Frenglish" (Hammerly, 1989a; 1989b), or a "hybrid of French language" (Collinson, 1989b). These criticisms are largely accepted, particularly when contrasts are made with native French-speakers. In fact, French language acquisition is one of three key areas used to rate second language education programs and, even in light of criticisms, FI tends to rate favorably on each of the three areas cited: (a) native English language development, (b) academic achievement and cognitive development, and (c) second language acquisition (Genesee, 1987; MacIsaac, 1991).

English Native Language Development

French Immersion's success "has been determined in large part by the fact that participating students attain high levels of functional proficiency in a second language *at no cost to their academic or English language development*" (Genesee, 1987, p. 17). Prior to formal English instruction, FI students score lower on tests of English literacy than English curriculum students, yet score higher than expected without formal instruction (Cummins & Swain, 1986; Genesee, 1983; Lambert & Tucker, 1972; Swain & Lapkin, 1982). Within one year of English instruction, FI students reach parity with English curriculum students. These findings were replicated for FI students whose English instruction began in grade two, three, or four (Genesee, Holobow, Lambert, Cleghorn, & Walling, 1985).

English spelling skills took one to two years to reach parity, while non-literary English skills (i.e., oral production and comprehension) were not adversely affected (Genesee, 1987; Swain, 1975). English proficiency was not considered threatened by any variations of FI (Genesee, 1987).

Academic Achievement and Cognitive Development

French Immersion did not seem to impair academic achievement and cognitive development (Cummins, 1976; Diaz, 1983; Genesee, 1987; MacIsaac, 1991). When tested in French, FI students did not differ from English controls in mathematics, geography, and science. Occasional lags were evident when tested in English prior to receiving formal

English instruction. No lags were evident following the onset of formal English instruction. Late immersion students who began FI in grade seven or eight, scored as well as their English counterparts in physics, chemistry and history, and tended to score equal or better in English language arts.

Researchers found evidence of enhanced cognitive abilities in FI students (Bain, 1978; Bain & Yu, 1984; Cummins, 1976; Genesee, 1987; Tucker & Lambert, 1975).

> *It is possible that the greater co-operation between the two hemispheres of the brain observed in bilingual people is related to the fact that they have a different type of intelligence -- more flexible, with a greater propensity for taking the broader view. Their perceptions are organized differently, since bilinguals are adapted to two systems of thought.* (Lambert, 1991, cited by the Office of the Commissioner of Official Languages, p. 5)

Interpersonal discourse and empathy were also believed to be enhanced by the immersion experience. Early FI students took a listener's blindness into account when explaining a visual display and rules of a game, whereas English curriculum students did not (Genesee, Tucker & Lambert, 1975).

French Language Acquisition

The belief of the 1960s and 1970s that FI programs produce nativelike proficiency has been largely refuted by the majority of researchers (Collinson, 1989b; Hammerly, 1989a; 1989b; Harley, 1984; Krashen, 1984; Lyster, 1987; MacIsaac, 1991; Pawley, 1985; Safty, 1989; Spilka, 1976; Swain & Lapkin, 1984). Although excellent functional skills are produced, French skills do not approach parity with native speakers who, in the French language, have a richer vocabulary, experience, and cultural base than FI students. Nevertheless, researchers often compare the linguistic capabilities of FI students with those of native French speakers. Findings in the research literature suggest that FI students tend to rate favorably.

An example of the FI-Francophone comparison of linguistic capabilities is found in a provincial study across the province of Quebec. Results of the Quebec Ministry of Education Examinations indicated "[FI] students score higher than the provincial average for French students on a variety of examinations written in French, as would be expected of a select group of students" (Genesee, 1987, p. 43).

Researchers also tend to compare FI students across program variations; however, comparisons between FI and FSL students are less frequent. The less frequent comparison of FSL students to FI students is perhaps due to the fewer hours FSL students have had to acquire the French language and, consequently, the highly functional French skills demonstrated by FI students. A contributing factor to the success of FI students may in part be attributed to the recognition of FI students as an elite group. Students in the FI program are considered "elite" in terms of socio-economic status (SES), aptitude, I.Q., and incidence of problems (Carey, 1984; Cummins, 1984; Olson, 1983). This "means that regular English-stream classes have a higher proportion of 'problem' children of all sorts" (Olson, 1983, p. 84). The fact that FI students outperform other French students in the province of Quebec may conceivably be due to FI students being comprised of an "elite" group (Carey, 1984; Olson, 1983), and because FI students were judged solely on the basis of academic material covered in class. If performance had been judged outside the studied curriculum, native French-speakers, given their richer French backgrounds, would surely have prevailed. Nevertheless, as a second language program, FI is highly rated on the basis of acquired French language skills.

In summary, FI students seem to rate favorably in English language development, academic achievement/cognitive development, and French language skills. Although FI students rate favorably in the three key areas assessed, one cannot help but recall the profound level of attrition in FI and wonder to what degree the exceptional success of FI is a function of a homogeneous group of high functioning students who remain in FI, in contrast with the many students who exit the program. The sample of FI students may indeed comprise an "elite" group of students that is then compared with students in English and Francophone programs.

Variations of Immersion Programs

There exist three primary variations of FI. The divisions most readily distinguished are: early, intermediate (delayed or middle), and late immersion (Genesee, 1987; Lapkin & Swain, 1984; MacIsaac, 1991; Stern, 1984). These three categories may be further subdivided into total or partial immersion. The primary distinctions between immersion program variations are time of commencement, duration of the total program, and quantity of time immersed in the French language on a daily basis.

Early immersion begins in kindergarten or grade one. Intermediate immersion commences in grade three, four, or five, while late immersion begins in grade seven or eight. Each program then proceeds according to total or partial program parameters.

The original and most common form of FI found in Alberta schools to date is early total FI (A. Nogue, Language Services Branch, personal communication, February 19, 1991). Within the Alberta context, total immersion usually implies 100 percent French in the first year or two followed by about 80 percent immersion until grade nine (Alberta Education, 1990). High school immersion rarely exceeds five courses through grades ten to twelve (Alberta Education, 1990; Panzeri, 1988).

Partial immersion varies with respect to the French-English ratio of instruction with the most popular division being 50 percent (Alberta Education, 1990). To be considered immersion, a minimum of 50 percent of French per school day is required in grades one through six, not less than 40 percent per year in grades seven to nine, and not less than 30 percent per year in grades ten to twelve (Alberta Education, 1990). It is noteworthy that partial early FI could easily be confused with French "bilingual" programs which, at a maximum level, might offer a 50/50 French-English curriculum split. Confusion arises when school systems, such as Edmonton Public Schools, offer FSL, FI, and bilingual programs.

Late FI has been especially popular in Ontario where financial considerations are paramount given the province's large populace (Genesee, 1987). A program is less costly if the number of years it is implemented is reduced. Preparation for late (or intermediate) total immersion may take one of two forms: (a) preparatory classes for one to two years preceding immersion, or (b) participation in a core French program (e.g., one French course per year) which precedes full immersion. Core preparation has been found to produce better transition into FI (Genesee, 1987). Nonetheless, with respect to the issue of which FI program variation is superior, the debate still continues.

To date, there have been mixed results with respect to which variation of FI produces the best academic and French language outcomes. The issue remains controversial and further research is required to resolve the debate (MacIsaac, 1991; Sloan, 1991). A distinguished panel of experts met in February 1991 to debate the issue of whether early, intermediate, or late immersion produced more favorable outcomes. It was not reported whether the variations of total or partial immersion were also discussed. The panel was comprised of

> *Gilles Bibeau of the Faculty of Educational Sciences of the University of Montreal, Richard Clement of the School of Psychology of the University of Ottawa, Birgit Harley of the Modern Language Centre of the Ontario Institute for Studies in Education and Marjorie Wesche of the Second Language Institute of the University of Ottawa. The moderator was Raymond LeBlanc, Director of the Second Language Institute of the University of Ottawa.* (Sloan, 1991, p. 34)

Three of four panellists claimed that under ideal circumstances they would select early FI. Reasons cited included: research supporting the malleability of the child, easy adaptation of young children to new grammatical systems, better pronunciation, and ready acceptance and motivation for second language learning (versus the resistance of older children). With respect to minority language groups, a solid grasp of the mother tongue before attempting to learn a second language was recommended by each of four panellists. This caution has been reiterated by other researchers prominent in the area who claim that a solid foundation in the first language will aid in the acquisition of a second language since the two language systems are interconnected (Cummins, 1984; Cummins & Swain, 1986). Strength in one language system leads to strength in a second language system and, conversely, weakness in one language system leads to weakness in both. The fourth panellist, Gilles Bibeau, recommended that second language learning not begin too early because high school graduates with a poor knowledge of their mother tongue had been identified. The article did not state whether Bibeau was referring to English, FI, or minority high school graduates. (My assumption from reading the article was that reference was being made to minority students.) Bibeau conceded better grammar and pronunciation were characteristic of early starters, but claimed later starters "acquire more complex structures more quickly" (Clement, cited in Sloan, 1991, p. 34). Bibeau did not commit to an optimal starting point in FI.

Double Immersion refers to instruction in two non-native languages, such as French and Hebrew. This form of immersion is less common than single immersion and will not be reviewed here (see Genesee, 1987 for a review of double immersion).

Submersion Versus Immersion - Immersion of a minority child into the dominant cultural language (a second language for the minority child) is called "submersion" as opposed to immersion. A widespread submersion program in Canada is English as a Second Language (ESL). Outside the home, students are totally submersed in the second language and frequently no attempt is made to retain the student's native language. Rather, the native language is subtracted. This operates in direct contrast to the mandate of FI programs which requires that the second language be taught without detriment to native language skills.

Immersion, an additive educational program in which both languages are expected to prosper equally, is perceived as a program for successful students, whereas submersion programs are offered to students perceived as having difficulty adjusting to school (Cummins, 1984). A transfer out of an immersion program is an indication of doing poorly, whereas a transfer out of a submersion program is an indication of doing well (Cummins, 1984). Cummins (1984) indicated that programs which promote the native language as well as the second language are desired and the universal goal should be one of bilingualism (promotion rather than subtraction of the native language).

Contrast of FI With Francophone and FSL Programs

Francophone Programs

It will be necessary to provide a cursory description of the history of Francophone education as it merged with, and diverged from, FI education in the province of Alberta to fully appreciate the distinctions now made between the two programs by Alberta Education. Originally, there was no distinction made between Francophone education and other forms of French education (Julien, 1991; A. Nogue, personal communication, November 19, 1990). Alberta simply offered "French" education. English education was compulsory and non-English education occurred in regions where other language groups happened to dominate. At the turn of the century, Alberta education allowed one hour per day of French instruction (Julien, 1991). To obtain French instruction at 50 percent per day, Francophone parents who could afford it sent their children to private Francophone schools. Alberta Education was slow to relax its restrictions on French instruction. The one hour per day French restriction continued well into the 1960s for public schools, and private schools continued to be restricted to 50 percent French instruction per day.

In 1963, the Royal Commission on Bilingualism and Biculturalism was formed, yet it was not until 1968 that Alberta Education allowed French instruction to increase to 50 percent in public schools (Julien, 1991; Office of the Commissioner of Official Languages, 1990). In 1969, another restriction was removed when the Alberta School Act was amended to allow "French to be used as a language of instruction in all twelve grades in 'bilingual' schools" (Office of the Commissioner of Official Languages, 1990). Previously, restrictions had been imposed on grade levels at which French instruction could be offered. French Immersion, which was introduced in 1965 in St. Lambert (a suburb of Montreal), began gaining momentum at this time and rapidly moved westward after 1971 (MacIsaac, 1991). No distinction had yet been made between Francophone and FI education, and French instruction in private Francophone schools seemed permanently restricted to 50 percent.

Francophone parents were in a double bind: they feared assimilation of their children into the English populace, but believed the provincial government would not legislate more French to their private schools (Julien, 1991). Consequently, they consented to a merger. In 1972 two Francophone schools closed (l'Académie Assomption and Collège St. Jean). Francophone students joined FI students in a new FI school (J. H. Picard). At this time, the term "French Immersion" became recognized. In 1976, Alberta Education permitted a maximum of 80 percent French instruction in public schools to accommodate the new demand from English parents seeking FI, or "bilingual" education for their children (Julien, 1991). Yet, it was not until ten years later, in 1982, that the Francophone goal for distinction between Francophone and FI education was realized (in the Canadian Constitution Act of 1982). In 1983 the first

Alberta private Francophone school designated to operate under s. 23 of the Charter opened for a brief period of time (Julien, 1991). In 1984 two Francophone schools opened in Alberta, one in Edmonton and one in Calgary, and for the first time Francophone schooling was operated out of public funds (Julien, 1991). Public funds have continued to be allocated to Francophone schools since this time.

The Canadian Constitution Act of 1982, specifically s. 23 of the Charter of Rights and Freedoms, conditionally guaranteed the language education rights of French and English minorities outside their respective regions of majority and, for the first time, a distinction between FI and Francophone students was acknowledged (Julien, 1991; A. Nogue, personal communication, November 19, 1990; Office of the Commissioner of Official Languages, 1990; Tarnopolsky & Beaudoin, 1982). Even with this historic benchmark in French-English minority education, Alberta Education resisted establishing Francophone schools due to the small number of Francophone students, and some experts indicate this resistance continues still (see Julien, 1991 for transcripts of interviews). Cited experts credit the lobbying efforts and determination of Francophone groups in Alberta with securing the distinction of Francophone education from FI education at the provincial level.

Francophone education is distinct from FI in that it is designed for native French-speakers and is designed to fulfil the requirements of s. 23 of the Charter. French Immersion education, on the other hand, is designed for English-speakers and does not meet the requirements of s. 23 of the Charter (Government of Alberta, 1988). Clearly, Francophone and FI students differ with respect to their knowledge of the French language. Whereas Francophone students are taught in their first language, FI students are taught in their second language. Instruction in one's first or second language is an irrefutable difference of the two programs.

> *It is important to distinguish between French language programs [Francophone] and other programs such as French immersion. Although French immersion programs provide the majority of instruction in the French language, the purpose of immersion is to enable English-speaking students to learn and to become proficient in French. French immersion programs are not sufficient to fulfil the rights of francophone parents.* (Government of Alberta, 1988 p. 9-10)

French as a Second Language (FSL)

In Alberta, FSL programs are usually optional and commence at either grade four, seven, or ten with the latter two entry points being most common. Some school districts make one period of French in grades seven to nine compulsory. Other school districts extend the compulsory French requirement to include grades four to nine.

There are three distinct differences cited between FI and FSL programs (Genesee, 1987). Genesee (1987) states, "second language learning in immersion is incidental to learning cognitive skills and acquiring knowledge" (p. 26). In contrast, FSL teachers are mandated to teach French directly as a subject area. Secondly, considerably more English is permitted in FSL although this varies greatly with the teacher. Many teachers of FSL in Alberta today may conceivably advocate the philosophy of Dr. Douglas Parker, Director of Modern Languages at the University of Alberta. Dr. Parker encourages a French unilingual approach to teaching FSL (personal communication, January 23, 1990). Thirdly, Genesee (1987) states that although FSL teachers attempt to teach French through meaningful social interactions, communication is usually guided, frequently remains mechanistic, and oral and written tasks in French are relatively minimal in comparison with those of FI programs.

Miller (cited in Sloan, 1989) states, "It is important to realize that the aims of core and immersion are different, and that there's ample room for both" (p. 35). Program goals and time of exposure to the second language differ markedly between FI and FSL. Some believe the comparison is unjust because of unfair differences such as total time of exposure to the French language, exposure to "unilingual" models, etc. (Carey, 1984). However, it is precisely these differences that merit examination to determine program effects on native language skills, academic skills, and level of French proficiency. Degree of proficiency desired will often determine one's program selection.

Another criticism of contrasting FI and FSL programs centers around group characteristics. French Immersion students are typically comprised of the brightest survivors (Olson, 1983), whereas FSL students typically comprise the full ability range. Attempts to contrast the two groups, therefore, meet with certain difficulties.

Administrative time, skill, cost and demand sometimes determine the kind of program that will be offered by school districts (MacIsaac, 1991; McGillivray, 1984). French taught as a subject area, rather than as a curriculum, requires far less daily time, staff, and administrative commitments.

In summary, FSL differs from FI in the following areas: less overall exposure of students to the French language, later entry points, optional or compulsory status, French taught directly as a subject area rather than used as a vehicle for learning, more guided and mechanistic communication-like drills, less emphasis on oral and written tasks, and less administrative costs.

In conclusion, this section has attempted to describe the FI program and further its understanding through a review of FI program characteristics (FI goals and methods, and the English, French and academic-cognitive competence of students within the program), the program variations of FI, and the distinction of FI from Francophone and FSL programs. French Immersion is characterized by an emphasis on verbal and auditory skills, inferential and conceptual skills, reasoning ability, and discourse competence skills of students. The following two sections will review within-child variables and external-to-child variables cited in the literature to determine the relationships of these variables to performance within the FI academic program.

B. Within-Child Variables

Research in this section stems from a model of learning that claims learning is the result of within-child variables. External factors that might also impact on learning are excluded. This position is known as the child-deficit model and is premised on the medical model (Das, 1983, 1985; Johnson-Fedoruk, 1990; Lindsay & Wedell, 1982). The child-deficit model and the remedial model derived from its philosophy will be described in greater depth in chapter five (also refer to Appendix C). Research with respect to within-child variables has involved the examination of individual strengths and weaknesses to determine their relationship to academic performance. For example, Genesee and Hamayan (1980) found that perfectionism, quickness to grasp concepts, and good behavior were correlated with good second language learning. To date, much research involving within-child variables has been contradictory and inconclusive. Investigations of the relationship of within-child variables to FI academic achievement has focused on several areas, each of which will be briefly reviewed here. The areas investigated include: language deficits, intellectual ability, attitude and motivation, third language learning and minority status, learning disabilities, and cognitive immaturity.

Language Deficits

Cummins (1978) stated that inadequate language skills may result in less than ideal suitability for FI. In later research, Cummins (1984) indicated that "bilingual and L2 [second language] immersion programmes are appropriate for children with a wide range of learning abilities and language skills" (p. 176).

According to Bruck (1982) language impaired individuals function with difficulty in both unilingual and bilingual academic programs. Bruck based these conclusions on findings from six successive cohorts of kindergarten children who were matched according to sex, age, teacher and SES, across four groups: FI with and without language difficulty, and English program students with and without language difficulty. It is noteworthy that students performed equally across both academic programs; therefore, there was no benefit to their exclusion from FI.

The Northern Alberta Reading Specialists' Council (1989) claimed children deficient in English language skills would be at greater risk when attempting to learn second language skills. Therefore, the argument against including language impaired students in FI was put forth.

Combined results indicate that language disabled students perform more poorly than their non-disabled peers in a unilingual setting; however, students perform at similar levels when compared with other language delayed individuals across academic settings. It is also suggested that language difficulty may be exacerbated in a second language situation. The research in this particular area is inconclusive.

Intelligence

Many researchers have argued that intelligence is a relatively poor predictor of FI academic success (Carey, 1984; Cummins, 1983; Genesee, 1976; 1983; Lapkin & Swain, 1984; Trites & Price, 1976). However, several researchers then proceeded to cite research findings in support of a relationship between intelligence and FI performance.

Cummins (1983) stated intelligence was related to certain French language skills (reading, writing, grammar, vocabulary, etc.). Genesee (1983) indicated lower IQ students performed poorly on formal language tests. Genesee (1987) later claimed that IQ played a major role in predicting speaking and listening comprehension for late FI students (entering FI in grade seven or eight), but not for early FI students. He postulated that older students required more academic and intellectual skills to perform at higher academic levels. Carey (1984) concurred, claiming intelligence, although not related to early FI success, was related to later French learning. Carey explained that this phenomenon was attributed to older students being more mentalistic. Therefore, some inconsistency in the relationship of intelligence to FI performance seems apparent.

However, one consistency did emerge. When contrasted with regular English stream students, researchers agreed that FI students had, on average, distinctly higher IQs (Carey, 1984; Cummins, 1976; Diaz, 1983; Genesee, 1983; Olson, 1983). Olson (1983) claimed, French Immersion students as a whole "do remarkably well in virtually all areas on standardized cognitive tests" (p. 84). Olson (1983) added, "Virtually every evaluation conducted by boards of education across the province of Ontario shows that French Immersion students have higher IQs" (p. 86).

Bruck (1985a; 1985b) reported that students who remained in FI despite difficulties were less dysfunctional than students who were transferred from FI into the English stream. Genesee (1983) claimed higher IQ students tended to function well and remain in FI, while lower IQ students tended to drop-out of the program. Although inconsistencies are evident, the above factors lend support to the fact that intelligence does relate to FI academic success. Intelligence tests are in fact designed to predict levels of academic achievement; therefore, that a relationship is found between intelligence and academic success seems expected.

Attitude and Motivation

Carey (1984) rated attitude, values, and ethnocentricity above the intelligence factor in influencing FI performance. Other researchers concurred, stating positive attitude and motivation can influence second language learning independent of intelligence (Bruck, 1985b; Gardner, 1986; Genesee, 1987; Sloan, 1991). "It follows then that students other than the intellectually gifted can master a second language in school by virtue of positive attitudes and motivations" (Genesee, 1987, p. 82). Perhaps, attitude and motivation are necessary, but insufficient components for successful performance in FI.

Third Language Learning and Minority Status

Genesee (1976) postulated that dual language backgrounds facilitate third language learning. Cummins (1987) claimed that academic progress and intellectual growth were enhanced in the immersion setting and students were not confused by third language learning situations. However, Cummins added that these and other questions, when they pertain to minority students, have not yet been fully answered by research. Therefore, both Cummins and Genesee recommended minority issues be examined further.

In terms of second and third language learning by minority students, Bibeau (1984) found that minority students whose second language was the language of majority, were not successful in FI programs. Rather, demographic research seemed to indicate that FI was a program of the dominant majority. Cummins and Swain (1986) have indicated that because of a threshold effect and the interdependence of first and second languages, the first language of minority students should be well learned before introducing a second language. Likely, this recommendation would follow for multiple language learning. Cummins (1987) claimed bilingual programs themselves had no negative effects for minority students.

Learning Disabilities

The National Joint Committee on Learning Disabilities (NJCLD) in the United States "is composed of representatives of eight national organizations that have a major interest in learning disabilities" (Hammill, 1990, p. 78). The NJCLD definition of learning disabilities (LD) is, consequently, commanding. The first part of the NJCLD definition has particular relevance for FI.

> *Learning disabilities is a general term that refers to a heterogeneous group of disorders manifested by significant difficulties in the acquisition and use of listening, speaking, reading, writing, reasoning, or mathematical abilities.* (Hammill, 1990, p. 77)

Given these statements in the LD definition and the FI program characteristics previously described, it could be assumed that LD students who demonstrate receptive language problems might experience considerable difficulty in FI since academic success is dependent upon verbal inferential skills. It is surprising, therefore, to read statements such as, "For LD children the French immersion program presents no added curricular demands" (Wiss, 1989, p. 527). Although English and FI curriculum requirements are similar with respect to academic and cognitive goals, the heightened FI reliance on verbal inferential skills would conceivably pose a greater challenge for students who experience difficulty in this area. Until the French language is acquired, conceptual and inferential skills are relied upon almost exclusively to sift meaning from interactions (Tardif & Weber, 1987). Nevertheless, the similar performance of language disabled students across English and FI programs may prove this rationalization faulty and would support the contention that Wiss (1989) presents: that LD students may likely perform no differently if placed in a FI, as opposed to a unilingual, educational program.

Trites and Price (1976) took an opposing position. They claimed FI caused learning disabilities where none would have occurred if placement had been in the English program. Bruck (1978) argued that FI does not cause LD. Bruck's research concluded that LD students acquired some measure of second language competence when placed in FI. Bruck further claimed that learning disabled FI students progressed at a slower rate when compared to non-LD students, but at a comparable rate when compared to LD students in the English program. Bruck, consequently, recommended that LD students remain in FI and receive appropriate academic remediation.

Cognitive Immaturity

Wiss (1989) argued the existence of a subgroup of students who were cognitively (and linguistically) immature and, consequently, were not believed suited to early FI. Wiss claimed this subgroup would benefit from later immersion instead. Results were extrapolated from a single case study and cannot be generalized to an entire student population. Based on this study, Wiss's conclusions claimed maturity was a factor in FI academic success. The difference in Wiss's findings was her claim that a specific "cognitive immaturity" could be detected and assessed. Based on these findings, Wiss argued the need for early screening to identify students who exhibited this cognitive immaturity.

Early screening would not necessarily prevent entry from the program which would, as Wiss cautioned, open the way to criticisms of elitism, but could identify students for remedial purposes. Screening would help identify students likely to encounter difficulty in FI, or encounter difficulty in both FI and English programs. Results could be used to forecast the provision of remedial services.

To summarize, several within-child variables have been reported in the literature and include: language deficits, intellectual ability, attitude and motivation, third language learning and minority status, learning disabilities, and cognitive immaturity. Although certain results correlate with academic success, there has been no clear, predictive evidence that any one of these variables will guarantee academic success in the FI program. Several variables cited also proved contradictory or inconclusive.

In brief, impairments in language skills were found to adversely affect performance in FI, yet perhaps not in a manner significantly different from its effect on performance in the unilingual English stream. Intelligence was reported as both related and unrelated to FI academic success. Attitude and motivation were considered components of successful FI performance, but likely insufficient in themselves. Learning disabilities were reported as both caused by, or as no consequence to FI. It was also stated that LD students progressed at a slower, yet comparable, rate in either FI or the English program. Results were inconclusive in the areas of cognitive immaturity and second and third language learning if a student is of minority status. When problems were detected, remediation was recommended by one researcher, and both screening and remediation were recommended by another. It was reported that screening would likely place FI in an elitist position. Currently, the open-door policy practiced in FI implies that academic success in FI is likely attainable for all students.

A unanimous view of FI students as a highly capable group was held by researchers. Within-child variables perpetuate the child-deficit model, which states when poor or successful academic performance occurs, the fault or credit belongs to the child. Failure in FI, according to the child-deficit model, constitutes "blaming the child" without regard for external factors that might also impact upon the learning process and on learning outcomes. Nevertheless, within-child variables cited in the literature appear to some degree to be correlates of FI academic achievement and likely play some role in determining FI academic success.

It seems reasonable to assume that since multi-faceted variables are cited in the research literature as involved in the learning process (Jones & Jones, 1990; Messick, 1984), that within-child variables are not solely responsible for learning outcomes. It is likely that the FI learning process is influenced by multidimensional variables that include external as well as within-child variables. Researchers of internal variables, for example, recommend stronger remedial support in FI. Although the intent is remediation of internal skills, this represents an external variable: attempting various remedial teaching strategies. It is, therefore, warranted that external variables be investigated.

C. External Variables

Wiss (1989) claimed, "it is highly unlikely that there exist children who cannot learn a second language: the crucial factors are the environment and the method of instruction" (p. 527-528). The message within this statement places a heavy burden on teachers who can control the teaching process, yet cannot always control the learning process. The teacher plays a role, but there exist multiple variables that influence a child's learning. Five additional variables which are external to the child and impact on FI success will be presented here and include: socioeconomic status (SES) and parental factor correlates, lack of intensive remedial services, parental helplessness, the teacher variable, and lack of resource materials. These areas are by no means exhaustive, but suggest factors external to the child may have a strong impact on student success in FI academic achievement.

SES and Parental Factor Correlates

A positive correlation has been consistently reported between socioeconomic status (SES) and the following parental variables: education of parents, parental commitment and valuing of children's academic achievement, parental support and attention given for children's academic achievement, and opportunities provided for children's cognitive stimulation (Cummins, 1984; Genesee, 1987). Therefore, it is of little surprise that each variable, and consequently SES, correlates positively with FI academic success (Cummins, 1984; Genesee, 1987). Low SES, consequently, correlates with low FI academic achievement because of its correlation to the above academically correlated variables.

The SES cross-section of FI students is perceived to have changed. Whereas FI was initially a middle- to upper middle-class program (Lambert & Tucker, 1972), its popularity has resulted in an expansion of the program not only geographically, but also across ethnic and SES backgrounds (B. Bain, personal communication, January 21, 1991). Consistent with an open-door policy, the FI program refuses no child. If FI students represent a cross-section of the SES population, this would be viewed as consistent with an open-door, or unselected clientele, policy. However, researchers claim this is not the case. Instead, an elite group of high functioning, capable students is seen in FI (Carey, 1984; Diaz, 1983; Genesee, 1983; Olson, 1983).

Consistent with the correlates of SES, Bibeau (1984) found that underprivileged students were not successful in FI programs. Demographic research seemed to indicate FI was a program of the dominant majority and privileged strata of society.

Lack of Intensive Remedial Services

Strong concerns were voiced with respect to the lack of intensive remedial services in FI programs (Bruck, 1985a, 1985b; Peel Board of Education, 1986; Wiss, 1989). Special education services exist in some FI schools in the form of resource rooms, but when situations demand more intensive remediation, academically weaker students must enter the

English stream to receive it.

Special education service deficiencies range from a lack of services to remediate deficient academic skills at a level more intensive than resource room assistance can provide, to a lack of enrichment opportunities for more capable students (Collinson, 1989a; Genesee, 1987). Hence, each special needs group in FI is considered disadvantaged, and special education program development in FI is recommended. The lack of remedial services is viewed as restrictive to student academic potential.

Parental Helplessness

Since the implementation of FI, non-French speaking parents have articulated feelings of frustration and helplessness at not being able to assist their children with homework (Gibson, 1984; Hayden, 1988; Lambert & Tucker, 1972). This has been an on-going and frequently stated concern associated with the FI program. Problems expressed have included an inability to monitor children's progress and an overdependence on school staff for aid. The only solution to this problem is to have parents learn the French skills necessary to comprehend the material or to trust the feedback of others in these areas (e.g., teacher, tutor). Without this, the problem will persist. The frustration of parents in this area may result in negative feelings on the parts of both parents and children during homework time, which may in turn impede practice time necessary for the acquisition of academic skills and, consequently, academic skills may suffer.

The Teacher Variable

The teacher is a key variable in the learning process (Dembo & Gibson, 1985; Emmer, Evertson, & Anderson, 1980; Evertson & Emmer, 1982; Grant & Rothenberg, 1986). It is the teacher who sets the learning climate and clearly is responsible for the provision of academic instruction (Jones & Jones, 1990). Not only are the teacher's skill and teaching style vital to learning outcomes, but the teacher's emotional and psychological well-being are paramount in the academic lives of students as well.

On-going stress and burnout of teachers in FI is cited by experts (Alberta Education, 1987a; A. Nogue, Language Services Branch, personal communication, November 19, 1990) and this stress is not unique to teachers in FI programs alone. Nevertheless, high public expectations, increased workloads, limited materials, inappropriate materials, limited access to resources, and teaching students with a wide variety of mixed French abilities reportedly contribute to FI teacher stress, burnout, and high level turnover.

French Immersion teachers contend with various academic weaknesses, provide "catch-up" programs and reassurance, and deal with the emotional issues of student drop-out and possible retention which, in the eyes of the student and likely many of those involved, signify failure. Low self-esteem and negative associations with school often result when failure is encountered. The teacher is a primary variable in the learning process, and certainly influences learning outcomes.

Lack of Resource Materials

The lack of FI resource materials is a commonly stated concern in the research literature (Alberta Education, 1987a; Genesee, 1976; Lyster, 1987; Mian, 1984; Northern Alberta Reading Specialists' Council, 1989). Many resources are simply not designed for FI students. Resources are designed for native French-speakers and are incomprehensible due to their assumption of background knowledge, vocabulary and colloquialisms, or materials are outdated and similarly incomprehensible, or materials are simply non-existent.

Lyster (1987) claimed that early 18th, 19th and 20th century French, without simplification, is frequently seen in FI readers. Inappropriate materials lead to student and teacher frustration, and reduce the likelihood of academic success. In an attempt to overcome this deficiency, teachers often exchange materials (Mian, 1984).

In summary, many external variables influence the FI learning process and impact upon learning outcomes. These external, or environmental, variables cannot be omitted when evaluating factors that influence student performance and FI attrition. Both internal and environmental variables correlate with learning and affect FI academic outcomes. Consequently, it is essential that both sets of variables be acknowledged in the FI remedial process, considered before drop-out from FI, examined in light of FI attrition rates, and considered in solutions presented to alleviate associated difficulties.

D. Remedial Decision Making Criteria

Efforts to discover the criteria involved in FI remedial decisions proved unsuccessful. Correlates of academic performance were frequently inconclusive or contradictory, and FI remedial decision making criteria could not be located. Instead, researchers recommended that such criteria be established (Genesee, 1983; Trites & Moretti, 1986; Wiss, 1989). The previous review of internal and external variables would indicate that multiple criteria are likely required.

Genesee (1983) stated, "It is my expressed opinion that there currently exists no single or simple criterion that can validly be used to decide the admissibility of individual children to Immersion programs. Such a decision should be based on multiple criteria and should probably be made only once the child's actual performance in Immersion can be judged" (p. 40). It is unlikely that one factor in and of itself would be sufficient to differentiate between successful and unsuccessful FI students, assist in remedial decisions, and adequately explain why students drop-out of FI.

Trites and Moretti (1986) stated FI learning difficulties seemed to be multicausal and they recommend establishing predictive criteria. Establishing predictive criteria of success or failure in FI would enable remedial criteria to be established (Genesee & Hamayan, 1980; Trites, 1981; Trites & Moretti, 1986; Wesche, Edward & Wells, 1982). Predictive criteria might also determine which students are at greater risk of attrition from the program.

Wesche, Edward and Wells (1982) found that predictive coefficients based on abstract reasoning ability and aptitude for linguistic elements and associations were consistently in the .40 to .60 range. Although coefficients were admittedly not high, these researchers stated the coefficients were sufficiently weighted to warrant further investigation into these areas for predictive purposes.

Wiss (1989) stated that early identification could lead to early treatment for students likely to experience difficulty in FI, or experience difficulty in both FI and the English stream. Genesee (1987) and Wiss (1989) warned that early identification for the purpose of screening students could lead to elitism. Genesee stated elitism would lead to FI for only a few, disqualification for many, and ill-feelings and program closure could result. That is, should FI become offered to only a few, it could well become offered to none. A positive consequence of screening could be the earliest possible identification of unlikely FI candidates. Screening poses one possible solution to intervene on children's behalf, avoid unnecessary academic frustrations, diminished self-esteem, and the negative consequences associated with trial, failure and drop-out from FI. Although no model of screening was specifically proposed, screening could indeed present one solution to protect the child against negative academic outcomes; however, without predictive criteria this does not seem as yet, an option. Screening could also be used, not for selection purposes but, as Wiss (1989) stated, to forecast the provision of remedial services. Currently, a review of the research literature did not reveal documented remedial criteria nor the current FI Remedial Model.

In summary, remedial criteria could not be located. Nevertheless, remedial criteria are recommended to: (a) predict which students are at greatest risk for academic difficulties and attrition, (b) guide programming and selection, (b) aid in transfer decisions, and (c) aid in establishing screening which could be implemented as a solution to negative academic consequences or used to forecast the provision of remedial services.

E. Reasons for Attrition

Several researchers cited reasons for attrition from FI. Genesee (1983) found that students who performed well in FI and held positive attitudes toward the program likely remained in FI. Conversely, students who experienced difficulty in FI tended to drop-out.

Bruck (1978) examined nine transfer students in a pilot study without contrast data from comparable students who remained in FI. Reading and arithmetic scores were assessed. There was no marked academic change for three students, two were performing very well, and four were still encountering difficulties. In terms of emotional and cognitive benefits parents, students, and teachers reported the transfers were moderately to greatly beneficial.

Positive aspects of transfer that were reported included: (a) parents were now able to provide homework assistance through the English language medium, and (b) the children could, and most did, receive intensive remedial services when transferred. Bruck claimed those students who continued to perform poorly likely had not yet received appropriate remediation; therefore, difficulties continued. Bruck also stated that generally, students who switched out of FI were those who exhibited the most severe problems academically, emotionally and behaviorally. In conclusion, Bruck argued the need for intensive remedial services in FI, and advocated against the use of transfer as a solution for academic difficulties.

Bruck (1985a) continued investigating the catalysts and consequences of transfer out of FI. She contrasted a sample of students who were transferred out of FI with another group who remained in FI despite difficulty. The group that remained in FI exhibited fewer problems than the transfer group, consistent with Bruck's 1978 pilot study. Bruck maintained that one year after transfer academic performance was insignificantly different from students who remained in FI. One year after transfer teachers reported modest improvement in reading and writing skills for the transfer group. There were statistically significant increases reported in cognitive and math skills across both groups. Therefore, according to Bruck, no transfer benefits emerged. Bruck reiterated her argument against transfer out of FI when students experience academic difficulty.

Bruck (1985b) reported variables that predicted the transfer of grade two, three, and four FI students. Students who were described by teachers as experiencing academic difficulty and likely to transfer out of the program were assessed across a number of variables and their progress was followed for one year. At the end of one year, transfer and non-transfer student variables were compared. Bruck identified five factors which tended to predict transfer out of FI (the fifth variable was reported as necessary, but insufficient): significantly poorer student attitudes toward school, toward learning, toward the use of the second language, various behavioral and motivational factors, and academic achievement. Academic achievement was not found to be significantly different between transfer and non-transfer students. Bruck (1985b) reported that parents cited two key reasons for transferring their children: (a) academic difficulty, and (b) being unhappy in school.

Like Bruck, Hayden (1988) interviewed teachers (N=24), students (N=28) and parents (N=30) with respect to reasons that prompted transfer out of FI. Using interview and questionnaire data, Hayden evaluated the opinions of parents, teachers, and the students themselves who had experienced considerable frustration in FI and subsequently dropped out. Parents' three primary reasons for transfer included: language arts difficulty, inability to assist children with homework, and frustration and emotional stress. Primary transfer factors cited by teachers included: language arts difficulties, poor test results, and an inability to do an increased amount of abstract work. Students rated reading and writing difficulties as the primary reason for transfer, and two areas were rated equally for second place: poor test performance, and parents who wanted English. Based on Hayden's results, four primary reasons for transfer surfaced: (a) difficulty in language arts across both languages (90 percent), (b) inadequacy of parents to help children with schoolwork, (c) frustration and emotional stress, and (d) teacher recommendation and test results.

Bruck's conclusions in part overlapped with those stated by Hayden. Hayden (1988) concluded that (a) continued academic difficulty would be expected when difficulty was demonstrated across both language mediums, (b) remediation was a prime consideration involved in the transfer issue, and (c) many affective problems were remedied by transfer. Hayden stated that transfer was not necessarily a panacea and concluded, "immersion may not be for all children....However, for children in monolingual programs, there is also a percentage who are also not successful" (p. 26).

Halsall (1991) surveyed educators to determine the extent that attrition was viewed as a problem. "Of the 353 surveys sent out, 74 were returned. This is a response rate of 21 percent. The respondents were: language coordinators, consultants, assistant superintendents, assistant principals and principals, curriculum supervisors, and department heads" (Halsall, 1991, p. 13-14). The attrition rate "was reported to range from 20 to approximately 80 percent of students"

(Halsall, 1991, p. 2). Although the study emphasized questions regarding secondary education, some questions regarding the elementary level were included to allow for comparison. Attrition reasons differed from elementary to secondary levels. Reasons for attrition reported at the secondary level included: lack of variety in courses, heavy work load, better grades anticipated in the English stream, dissatisfaction with the quality of instruction, change of schools necessary to continue FI, satisfaction with the attained level of French, and boredom. Reasons for attrition reported at the elementary level included difficulty learning French, difficulty reading English, poor relationship with the teacher, emotional-behavioral problems, and the need for special education support. Whereas academic and/or other difficulties were reported as the primary reasons for elementary attrition, the reasons at the secondary level seemed attributed to a higher functioning group of achievers.

Lemire (1989) conducted semi-structured interviews with 12 principals to discover their perceptions of FI with respect to 10 selected areas. One of these areas addressed student enrolment. Of the 12 principles interviewed in schools across Alberta (1987-88), seven reported enrolment increases, four reported stable enrolments, and one reported a decrease. Principals who reported enrolment increases attributed these increases to: obtaining students from outside the school system boundaries (since there were no FI programs offered in neighboring schools), location of the school in a new area, and the continuing popularity of FI. Principals who reported stable enrolments attributed these to a minimal change in the local population. The principal who reported decreasing enrolments attributed this to relocation of students, academic difficulties, unsupportive/uncommitted parents, dislike of FI by the student, school recommendation of withdrawal, and/or due to an aging neighborhood. Lemire (1989) stated that withdrawal from FI appeared to be a controversial issue with most schools.

> *For one, it frustrates teachers in the English program who are having to accept students who feel they failed in French.... One principal said that he encourages students to finish the year in the program, however, "in grades 1 or 2 if we discover a problem and feel quite confident that the child is unsuitable for the program, we encourage a move as quickly as possible into the English program so that they don't lose a year." Another reported, "Most attrition is related to achievement... students having learning difficulties or average students whose parents feel they could do better in the English program."* (Lemire, 1989, p. 25)

In summary, whereas Bruck's results reported attitudinal and motivational variables as primary factors in transfer decisions, and academic achievement as necessary but insufficient, Hayden's results supported language arts academic difficulty as the primary factor involved in transfer. Halsall's findings reiterated academic difficulty as the primary reason for elementary attrition, although the reasons reported at the secondary level seemed to indicate a higher functioning group of achievers who were selective in choosing their courses and their academic program options. Indicated was an element of choice: secondary students could remain in FI and do well, or exit to the English program and do well. Elementary students, however, choose between failure if they remain in FI and a chance they might pass if they exit to the English stream. Lemire's research also indicated academic difficulty as a primary factor in decreasing enrolment. The remedial model, consequently, occupies a prominent role in attrition. Academic difficulty could not, or frequently was not, remediated in FI and the frequent result was exit from the program.

F. Chapter Summary

Chapter II provided a description of FI and indicated that FI, as an educational program, is both viable and successful. The history of FI dates back to 1965. Since its inception, FI has evolved into a widely ascribed educational program. French Immersion methods rely on a holistic, integrative approach which emphasizes inferential skills applied to a real life communicative setting. French Immersion is fundamentally an academic program and acquisition of the French language is a secondary goal of the program: French is learned incidentally through its use as a vehicle for academic learning.

Many variables were found to correlate with FI academic performance, yet research did not point to any one variable, or group of variables, as definitively predictive of success or failure in FI. Nevertheless, students who remained in FI were described as a highly capable, and perhaps elite, group. Students who dropped out exhibited significantly more difficulties. It is not clear whether FI students are elite as a function of the attraction of elite families to the program (whether the brightest families select FI for their already advantaged children), or whether FI students as a group become elite because lower functioning students have dropped out of the program and, consequently, the remaining students are "survivors." Likely, both events have an impact on the defining characteristics of FI students in general.

French Immersion remedial criteria could not be located and "common sense" clinical criteria are insufficient. The remedial process and the variables within this process require further investigation. It remains to be discovered whether the process is contributing to a solution or continuing the problem. At this time solutions suggested within the review of the literature include: (a) implementing more intensive remedial supports in FI, and/or (b) introducing screening. The current situation, with its high number of casualties, is deemed unacceptable and a search for solutions is warranted.

Reasons for attrition varied. Academic difficulty was a primary reason cited for attrition. Other factors were also cited and included: emotional and behavioral problems, and poor attitude toward learning, toward school, and toward the use of the second language. It appeared from the literature that many factors influence FI academic performance. Variables that determine FI academic performance appeared to be multicausal and multidimensional. The influencing factors in attrition and the consequences for students, therefore, require further investigation. The FI remedial model itself has been brought into question. Less clear is the actual structure of the model and the variables that correlate highly with FI success.

It remains to be discovered whether successful and unsuccessful FI students can in fact be differentiated using clinically derived (currently used) variables, and whether students who perform differently (high, average, and low functioning) in FI make different academic gains across educational measures. The influencing factors in FI attrition, the model of learning operating in FI, and the remedial practices derived from this model are as yet unknown. Data are required to highlight and confirm the problem of FI attrition, and the factors that impact upon attrition prior to being able to generate a model, and generate solutions to the negative consequences inflicted on students as a result of the FI remedial model and the attrition process.

Implications for research within the present study are apparent. To highlight and confirm the problem an investigation into the factors that influence FI attrition is required. Highlighting the problem of FI attrition will necessarily include an investigation into factors that impact upon the attrition process: distinctions between successful and unsuccessful FI students, appropriateness of teacher perceptions, differences of high, average and low functioning FI students across educational variables and their performance over time, and differences between groups of FI students to determine whether students who remain in FI become progressively higher functioning and homogeneous as they advance in grade level, and whether lower functioning students resemble drop-outs and high functioning students resemble "successful" students who have been in FI for approximately 10 years. Empirical data will be used to highlight the factors underlying FI attrition and will be used to identify the model of learning operating in FI and the remedial model derived from this model of learning. Alternative remedial models will be proposed, and solutions to the negative consequences associated with FI attrition generated.

G. Research Questions

During the course of this study an attempt will be made to answer the following research questions which will then be used as a basis for model building.

1. Can successful and unsuccessful FI students be differentiated on the basis of academic/clinical data?
2. Can teacher perceptions of high, average, and low functioning FI students be supported by independent test scores?
3. Will high, average, and low functioning FI students make different academic gains across five repeated measures?
4. Will FI students become more homogeneous across grades one to six?
5. Will high functioning grade one to six students resemble the successful group, and low functioning grade one to six students resemble the unsuccessful group?

III. METHODS AND PROCEDURES

Study Overview

This is a confirmatory, model building study and data from FI students will be used to highlight and confirm problems pertinent to FI attrition. Variables evaluated were derived from current clinical decision making methods. It will be determined whether successful and unsuccessful FI students can be differentiated on the basis of academic/clinically derived variables; whether teacher perceptions of high, average and low functioning FI students can be supported by independent test scores; whether academic gains of high, average, and low functioning FI students differ; whether FI students become more homogeneous with respect to their level of performance as they move from grades one to six; and whether high functioning FI students resemble successful students and low functioning students resemble unsuccessful students. Based upon these results, primary factors involved in FI attrition will be highlighted, and the remedial model operating in FI described. Difficulties with the current model will be presented, alternative models will be generated, and solutions proposed.

Consequently, this study consists of two parts. Part one focuses on data collected from Successful (completed a minimum of 10 years of FI), Unsuccessful (transferred out by approximately grade six), and grade one to six FI students (currently enroled in FI). Part two utilizes this data to highlight problems, conceptualize the model operating in FI, describe the remedial decision making process in place, propose alternative models and, having described the factors perceived to contribute to FI attrition, generate solutions to resolve the negative outcomes associated with attrition.

Part One: Differentiating Levels of FI Functioning

Subjects

The examiner had access to the following data pool: 37 Successful grade nine (N=22) and grade 10 (N=15) FI students, and 34 Unsuccessful FI students who ranged primarily from grades one to six (one student in grade eight, mode=grade two). Unsuccessful students had transferred out of FI immediately prior to data collection. Students came from a local elementary school that was readily available to the examiner. This school district is not believed to significantly differ from districts of comparable size that offer a FI program. At the time of data collection, grade ten was the highest level of FI offered by this school district. (French Immersion programs advance one grade level per year, corresponding to the progression of the original group of FI students at a school or in a district).

Students were considered "Successful" if they had completed about ten years of FI and were still enroled in the program. The kindergarten year contributed to this ten-year period. Students were considered "Unsuccessful" if they encountered significant academic difficulty in FI and subsequently transferred out of the program. Data from all students within these two data pools were utilized.

Fifty-four (N=54) grade one to six FI students currently attending FI were also selected for participation in the study. The elementary level was selected because it offered the greatest range and number of students, and was the area from which most referrals came. An attempt was made to select as evenly distributed a sample of grade one to six students as possible. A pool of grade one to six students (N=108) was obtained by teacher nomination during June of the year preceding data collection (while students were completing ECS to grade 5). Nominations were made from an available population of elementary students known to be continuing in FI the following year. After one year of working with students, it was assumed that teachers would have excellent knowledge of the performance of students, and be able to adequately select a representative range of students to comprise high, average, and low functioning groups at each grade level. An equal number of students classified as high, average, and low academic performers relative to each class was obtained.

Teachers were asked to provide the names of four high, four average, and four low achievers/performers from each class (two from each grade of a split class) (Table 1). The pool contained 24 students in each of grades one to three (six classes), and 12 students in each of grades four to six (four classes) (N=108). Half the students within the pool were then randomly selected for the sample (N=54). Two students were randomly selected from each category of four students (high, average, low). The sample comprised 18 to 27 percent of students from each class (mean of 23.5 percent).

The sample size was thought feasible for the statistical operations anticipated and provided a maximum number of students while maintaining distinctions between high, average, and low performers. The pool of names was maintained until testing was complete. In the event that students moved before testing was complete, a replacement would then be easily accessible.

Table 1

Sample Selection of Grade 1 to 6 Students

Grade	Classes	# of Students	Teacher Selected Ranges	Pool	Sample
1	2 full	44	4 High, 4 Average, 4 Low	24	12
2	2 full	35	4 High, 4 Average, 4 Low	24	12
3	2 full	49	4 High, 4 Average, 4 Low	24	12
4	1 full, 1 half	32	4 High, 4 Average, 4 Low	12	6
5	2 half	31	4 High, 4 Average, 4 Low	12	6
6	1 full, 1 half	33	4 High, 4 Average, 4 Low	12	6
				108	54

Variables and Tests Used

Variables comprised three general categories: (a) psychoeducational variables which were derived from complete psychoeducational assessments (10 Successful and all Unsuccessful students (N=34) received psychoeducational assessments), (b) educational variables which were derived from data regularly collected and reported at the school level, and (c) independent test variables which were derived from measures considered external to the classroom, but still derived from regular in-school procedures. Variables comprised those used in clinical procedures to assist with remedial decisions.

Six psychoeducational variables were used which included Verbal I.Q., Nonverbal I.Q., and four cognitive processing skills: language skills (verbal auditory), verbal reasoning, memory, and visual perceptual skills. Neurological impairment was also indicated provided this information was obtained from individuals (e.g., neurologists) skilled in this area. Intercorrelations between tests were recognized; however, psychoeducational variables are reported as sufficiently distinct to warrant an independent evaluation of individual strengths and weaknesses (Sattler, 1982; Sattler, 1990; Wechsler, 1974). Clinical training and practice require that each skill area be reported separately when using a psychoeducational battery of tests. Independent information from subtests is further supported by the fact that subtests continue to be evaluated distinctly in textbooks and regarded distinctly within clinical decision making procedures (Sattler, 1982; Sattler, 1990; Wechsler, 1974). Intercorrelations will be taken into account during the analyses and discussion of results.

Psychoeducational variables were derived from an extensively used battery of psychoeducational tests from which current clinical remedial decisions are routinely made. Students who had not received a psychoeducational assessment were still evaluated on Verbal and Nonverbal I.Q., but by a system wide test (Canadian Cognitive Abilities Test (CCAT)), rather than by an individually administered test. Psychoeducational assessments for each student in the Unsuccessful group were performed by this examiner preceding the remaining data collection.

Eight educational variables, excluding I.Q. scores derived from the CCAT, were used. Variables included: incidence of referral for assessment, reason for referral, incidence and type of academic assistance, and academic achievement in French, English, Math, Social Studies, and Science as determined by report card grades.

Five additional variables external to the classroom were included and comprised three subtests of the Canada French Immersion Achievement Test (FIAT) (spelling, word identification, and passage comprehension), and two Curriculum Based subtests which were derived from word lists enclosed in the FI elementary curriculum guide (spelling and word identification). Students were expected to have mastered each word list at specified grade levels.

Verbal and Nonverbal I.Q.

Verbal and Nonverbal I.Q. scores were derived from the Wechsler Intelligence Scale for Children-Revised (WISC-R), a highly valid and reliable individually administered intelligence test (Sattler, 1982; Wechsler, 1974). Students who had not received a complete psychoeducational assessment were not administered the WISC-R and received Verbal and Nonverbal I.Q. scores from the CCAT.

The CCAT (1982) provides 3 measures of general ability:

Verbal (effective as an indicator of general academic competence), Quantitative (arithmetic skills), and Nonverbal (visual motor integration, perceptual, and motor skills). While not as reliable as the individually administered WISC-R, typical reliability coefficients reported for the CCAT are .92 for the Verbal Battery, .89 for the Quantitative Battery, and .90 for the Nonverbal Battery (Thorndike & Hagen, 1982). Concurrent validity for the CCAT ranges from the mid-60s (Nonverbal) to the mid-80s (Verbal).

Cognitive Processing Skills

Cognitive processing skills were evaluated by relevant subtests of the WISC-R and by supplemental tests administered to corroborate WISC-R findings. To reiterate, the WISC-R is used routinely to assess cognitive skills. Subtests of the WISC-R provide information used to make clinically based remedial decisions.

Language skills were assessed by four of six Verbal subtests of the WISC-R. The subtests included: Information (general knowledge), Similarities (verbal reasoning), Vocabulary (word knowledge), and Comprehension (social knowledge and reasoning) (Sattler, 1982). Two verbal scale subtests not used in the study were Arithmetic and Digit Span. These two subtests assess numerical reasoning ability and auditory short term sequential memory respectively and, consequently, are less language related than the four subtests previously described (Sattler, 1982). Three of four subtest scores that were equal to or greater than one standard deviation below the standard subtest mean (standard score of 10) resulted in students being rated deficient in language skills. If this criterion was not met, language skills were rated within the norm.

Verbal reasoning skills were regarded as deficient when performance on the Similarities (verbal reasoning) subtest of the WISC-R fell one standard deviation or greater below the standard subtest mean (standard score of 10).

Memory skills were evaluated by relevant WISC-R subtests and, if memory skills were deficient on the WISC-R, they were corroborated by supplemental measures. Relevant WISC-R subtests included: Information (long term memory), Digit Span (auditory short term sequential memory), and Coding (visual short term associational memory). If any one of these subtests deviated significantly below the standard subtest mean (standard score of 10), at least one of the following supplemental tests was administered: Wepman Auditory Memory Span Test, Wepman Visual Memory Test, or the Learning Efficiency Test (LET). The latter test provided an evaluation of immediate, short term (brief delay), and long term memory (brief interference) across auditory, visual, sequential, and nonsequential skills. Memory was considered deficient when the majority of measures indicated a significant performance deficit (one standard deviation or greater below the standard subtest mean).

Visual skills were inferred from performance on relevant subtests of the WISC-R which included: Picture Completion (visual discrimination), Picture Arrangement (visual sequencing), Block Design (visual-spatial skills for three-dimensional, abstract designs), and Object Assembly (part-whole relationships). Supplemental tests were administered to corroborate deficits demonstrated on the WISC-R and included either the Developmental Test of Visual-Motor Integration (VMI) or the Bender Visual Motor Gestalt Test. One of these supplemental tests was routinely administered during psychoeducational assessment. Visual skills were considered deficient when the majority of relevant measures produced scores of one standard deviation or greater below the standard subtest mean.

Academic Achievement

Measures of academic achievement in the areas of English, French, Math, Social Studies, and Science for grade one to six students were based on report card scores. Scores for grade one to three students were converted from letter grades to stanine scores based on teacher specified equivalencies (Table 2, Appendix A). In this way, comparison with upper elementary stanine scores was made possible.

Academic achievement for the Successful group was based on report card scores (stanines). With respect to the Unsuccessful group, English scores were derived from the Ekwall Reading Inventory (ERI) and French scores from the Canada French Immersion Achievement Test (FIAT). Scores from the ERI and FIAT were used because Unsuccessful students performed significantly below grade level, or were non-

Table 2

Conversion Formula From Letter Grades to Stanine Scores

	LETTER GRADE		STANINE SCORE
Grades 1 to 3	A+, A	=	9
	A-, B+	=	8
	B, B-	=	7
	C+, C	=	6
	C-, D+	=	5
	D, D-	=	4
	U	=	below 4

readers. These students often followed independent instructional programs which provided anecdotal evaluations, or comments, rather than letter or stanine grades. The FIAT provided percentile scores, standard scores, and descriptive classifications (e.g., above average). The ERI provided reading levels which included the levels of frustration (mastery of 50% or less), instruction (60% or more), and independence (90% or more). The grade levels of the ERI ranged from preprimer to grade nine. The ERI provided an evaluation of oral reading skills, oral reading comprehension, and silent reading comprehension. The ERI manual (1986) documented reliability coefficients of .82 for alternate oral forms and .79 for alternate silent forms (Ekwall, 1986). Two examiners were used to derive these coefficients (one for the oral forms, the other for silent reading forms). Consequently, coefficients were reported in the ERI manual as measures of intrascorer reliability. (A description of the FIAT is reported below.)

Academic Assistance

Academic assistance referred to the incidence of remediation received, the type of assistance received (resource room, retention, teacher aide, or tutor), the grade(s) in which assistance was received, and the duration of assistance.

Psychoeducational Referral and Reasons Cited

A search of student records determined whether or not a psychoeducational assessment referral had been made, and cited the reasons given for the referral. It was necessary to determine whether referrals were primarily made in response to academic difficulties or in response to other factors, and whether referrals resulted in a transfer out of FI. It was also important to make distinctions between students referred for enrichment and those referred for academic difficulties.

French Immersion Achievement Test (FIAT)

The Canada French Immersion Achievement Test (FIAT) (1987) was the only standardized FI test discovered by this examiner and known to two FI consultants at the time of this project. The FIAT was normed nationally on FI students from grades one to seven (over 700 students) in over 100 schools, and across 10 provinces and the Yukon Territory. During the norming process, attempts were made to control for gender, school size, and community size. The FIAT evaluated students across four subtests: Spelling, Arithmetic, Word Identification, and Passage Comprehension. Individual administration time was estimated in the range of 30 to 60 minutes. Basal and ceiling criteria applied. Scores on the FIAT may be converted to percentiles, standard scores, or descriptive classifications (e.g., above average). The test's authors claim the FIAT is able to "function formally as an individualized screening test and informally as a diagnostic measure" (Wormeli & Ardanaz, 1987, p. 3). However, the primary purpose of the FIAT is as a FI achievement measure. Its use in providing remedial decision criteria was reported to be possibly inappropriate. Wormeli & Ardanaz (1987) claimed the FIAT "differentiates remedial from nonremedial pupils" (p. 48-49). However, they acknowledged that this conclusion was based on research with a very small sample. The Word Identification subtest was reportedly the greatest discriminator among remedial and non-remedial groups.

Reliability coefficients for the FIAT were reported as "better than .80 for all but six of the twenty-six subtest by grade values....These results were judged to be adequate for the purpose of the test as described above" (Wormeli & Ardanaz, 1987, p. 48). The FIAT Technical Manual did not indicate which six of the 26 subtests had reliability coefficients that fell below .80, nor did it state by what amount these six coefficients deviated below this figure.

Curriculum Based Tests

Curriculum Based tests were difficult to locate in FI.

French Immersion instruction is holistic and specific skill areas are addressed progressively over several years. Consequently, the only test this examiner could locate that was consistently applicable across grades one to six, and reflected the increasing competence of grade level advancement was a set of word lists contained in the FI elementary curriculum guide (Alberta Education, 1987b). The curriculum guide specified that teachers could expect students to have mastered each word list by a specified grade level. Consequently, the word lists provided some universality in curriculum based testing across grades not found elsewhere by this examiner. These word lists were used to test student proficiency in spelling and word identification skills across grades.

Procedure

The procedure for this study was to obtain scores from school records, acquire results from regularly administered tests, acquire results from components of tests routinely used in the FI program, and complete surveys to answer demographic questions. Demographic information and data would be collected from approximately 25 percent of grade one to six students, grade nine and 10 students who comprised the Successful group, and those students who had dropped out of the program who comprised the Unsuccessful group. Grade one to six students comprised a sample which was randomly selected from teacher nominations. Successful and Unsuccessful students comprised the population of students available to the examiner.

Teachers completed demographic questionnaires for Successful, Unsuccessful, and grade one to six students, and provided summaries of testing to the examiner (Appendix B). The examiner administered all psychoeducational assessments for the Unsuccessful group.

By the fall of 1988, pertinent information generated from these assessments and demographic questionnaires were recorded and recording was concluded. The ERI was administered by the examiner as a routine part of psychoeducational assessment. Pre- and posttest scores of the FIAT and Curriculum Based tests were compiled in the fall and spring of the 1988-89 academic year. The CCAT, routinely administered each October to students in grades two, four, and six, provided Verbal and Nonverbal I.Q. scores and were collected in October of 1988. Students who had been attending grades one, three, and five in 1988, received CCAT scores in October of 1989 through regular school testing. Data collection commenced in 1988, and was completed by early 1990.

The vice-principal/FI consultant and the resource room teacher were instrumental in overseeing data collection at the school. The resource room teacher, who usually administers the FIAT, administered the passage comprehension subtest of the FIAT and scored all FIAT subtests. Spelling and Word Identification subtests of both the FIAT and the Curriculum Based tests were administered by grade one to six teachers. All tests were administered individually with the exception of the Curriculum Based spelling subtest, which was administered in groups. To ensure uniformity of administration and scoring procedures, teachers were instructed in test procedures, administration and scoring by the resource room teacher.

Design and Analysis

1. A one variable by two group, between group design (1 X 2) for each of 12 variables will be used to answer research question one. Successful and Unsuccessful FI students will be contrasted across 12 variables which have been, and currently are, used in clinically based remedial decisions. Seven psychoeducational variables will be investigated and include: Verbal I.Q., Nonverbal I.Q., and five cognitive processing skills (originally continuous scores, but now appearing as categorical data: deficit or no deficit). Successful and Unsuccessful FI students will then be contrasted across five remaining variables: French and English academic achievement, academic assistance, assessment referral, and reason for referral (except for Successful student achievement scores, all scores appear as categorical data). Scores from I.Q. data will be contrasted using an analysis of variance. The entire Unsuccessful group (34 of 34) received complete psychoeducational assessments, whereas only 10 Successful students (10 of 37) received psychoeducational assessments. Consequently, the five cognitive processing variables may be contrasted with these subjects alone since this data are unavailable for the remaining Successful students (N=27). The assumption, however, is held that the probability of the remaining (N=27) Successful students having problems in these

areas is likely lower. The probability of deficits with respect to these five variables is perceived as lower because difficulties would likely have impacted negatively on academic achievement and, consequently, would likely have been reported. Given that data are both continuous and categorical, and two scores come from different metrics (e.g., FIAT and ERI achievement scores differ from stanine report card scores), data from Successful and Unsuccessful students will be evaluated descriptively and an analysis of variance (ANOVA) used where appropriate (e.g., I.Q. scores).

2. A one variable by three group (1 X 3) between group design for each of twelve variables will be used to answer the second research question (Table 3). Grade one to six high, average, and low functioning FI students (N=54) will be contrasted on each of seven variables and each of five pretest variables to determine whether teacher perceptions of high, average, and low functioning FI students will be supported by test measures. (Pretest scores are used because they are closer in time to actual teacher selection.) Collapsing across grades high, average and low functioning FI students will be compared on each variable. The seven variables include: Verbal I.Q., Nonverbal I.Q., French, English, Math, Social Studies, and Science achievement scores. The five pretest variables include: three subtests of the FIAT (spelling, word identification, and passage comprehension) and two subtests of the Curriculum Based tests (spelling and word identification).

Scores are continuous and differences will be evaluated using an analysis of variance (ANOVA) for each of the twelve variables (12 one-way, or 1 X 3 ANOVAs).

Table 3

One-By-Three Between Group Design For 12 Variables

	LEVEL OF FUNCTIONING		
	High	Average	Low
KEY VARIABLE 1-12			(n=54)

3. To evaluate the academic gains of grade one to six students in research question three, a three group repeated measures design will be used (3 X 2). Grades one to six will be collapsed and the three groups (high, average, and low functioning grade one to six students) will be contrasted across five pre- and posttest variables (three FIAT subtests and two Curriculum Based tests). To determine the significance of pre-post differences an ANOVA for repeated measures will be used.

4. A three group (high, average and low functioning grade one to six students) across six grade level design (3 X 6) for each of twelve variables will be used to answer research question four. Twelve three-by-six (3 X 6) ANOVAs will be used to determine interaction differences across grades. High, average, and low group means per grade (three means per grade) will be contrasted across grades for each of the twelve

variables reported in design two above, with the exception that five posttest scores will be used. (Posttest scores are used to allow students the maximum time for differentiation between groups to occur.) A decrease in variance across grade levels will indicate that students become increasingly homogeneous as they progress from grades one to six. A main effect could occur at each grade level and provide information with respect to significant differences at that grade level. However, an interaction across grades is needed to show differences between grades.

5. A comparison of high and low functioning grade one to six students with Successful and Unsuccessful students respectively will be used to answer research question five. Data will be contrasted descriptively and similarities and differences noted. Successful and Unsuccessful students will be contrasted across twelve variables which have also been used as data for grade one to six students. Therefore, a systematic evaluation of these twelve variables would determine whether the Successful group shows similarities with the high functioning group on any of these variables, and a similar evaluation would reveal similarities between the Unsuccessful group and low functioning students. To reiterate, the twelve variables include: Verbal I.Q., Nonverbal I.Q., five cognitive processing skills, French, English, Academic Assistance, Assessment Referral, and Reasons for Referral.

Predicted Outcomes

1. Significant differences are expected for Successful and Unsuccessful FI students across the majority of variables evaluated.
2. Teacher perceptions of high, average, and low functioning grade one to six students will be supported by independent test scores.
3. High and low functioning students in grades one to three will make different academic gains across five repeated measures, the average group will not differ significantly from high or low groups, and little difference in academic gains between groups will occur among grade four to six students.
4. Students will become higher functioning and more homogeneous as they progress from grades one to six: group variance across grades will decrease.
5. High functioning grade one to six students will resemble the Successful group (grade nine and 10), and low functioning students will resemble the Unsuccessful group (grade one to six with a mode of grade two).

Limitations and Implications

An event that will likely influence findings from grade one to six FI students will be the loss of a substantial number of low functioning students the year prior to data collection. There were 49 elementary referrals in the academic year preceding data collection (these numbers precipitated my decision to undertake the study). Most, if not all of these students transferred out of FI by the end of that school year. Their names did not appear in the pool of low functioning grade one to six students nominated by teachers, and the majority of these students comprised the Unsuccessful group (N=34). By retaining these students in the Unsuccessful FI group, their academic/clinical data could be further scrutinized. However, the grade one to six sample will likely be higher functioning and more homogeneous than had data been collected from the previous year. This event will of course be discussed during data interpretation. High, average, and low functioning grade one to six students may, consequently, comprise forced categories since a substantial number of low functioning students had recently dropped out. In light of this event it remains to be determined whether student groupings can be maintained, or whether they should be combined if found to be contrived, rather than real. This may only be determined during data analyses.

A second limitation is that Unsuccessful students were derived primarily from grades one to six (N=24 came from grades one to three; mode=grade two), whereas Successful students came from grades nine and 10. Data were collected at the same time period, but a comparison of these two groups necessarily cross significant age and life experience boundaries. Grade one to six students presented yet another age category different from that of Unsuccessful or Successful students. Grade one to six students more closely resembled the Unsuccessful group in age; however, they may more closely resemble the Successful group in academic functioning. Unfortunately, age and life experience differences across groups may affect the results.

Data will be used to highlight and confirm the existing problems involved in FI attrition. Implications include providing data to reconceptualize variables involved in FI attrition and enable subsequent model building. If thought in the area can be stimulated, models generated, and solutions explored, the study will be considered a success.

Part Two: Learning and Remedial Decision Models

Procedure and Design

Part two will use the results from part one of the study as a starting point from which to begin an evaluation of FI, the factors involved in attrition, the learning philosophy applied in FI, and the remedial model operating in FI. Data from part one and the remedial model itself will reveal the learning philosophy operating in FI. An understanding of the FI learning model will be developed through a review of the literature and the clinical procedures and data discovered. The factors involved in FI attrition and the negative impact on students will be evaluated, and alternative models to provide solutions explored. Whereas part one investigates data to identify and highlight the problem, part two generates models and practical solutions to remedy the problem.

An evaluation of models will be determined by the results of part one of the study (current model operating and deficiencies highlighted). Consequently, it was deemed premature to present a review of various models simultaneously with the chapter two review of literature. Any discussion of models operating in FI require that they be predicated by data. Although models abound in the literature, the learning model and remedial models operating in FI and impacting on attrition cannot be ascertained without reference to supporting data. Simultaneous presentation of models could cause more confusion than clarity. Learning and remedial models could be misinterpreted as an attempt to find immediate solutions to specific skill deficits, rather than incorporate the broader view of why we are evaluating certain variables and not others, and how variables relate to a reconceptualization of FI attrition. The entire process requires that the problem of FI attrition and the variables involved in this process be highlighted without allowing the reader to become distracted by the characteristics of the data. An evaluation of the process in its entirety is required before alternatives and solutions may be generated.

Predicted Outcomes

Part two will utilize the results from part one to aid in a reconceptualization of the learning model and remedial model operating in FI. Factors perceived to be involved in FI attrition will be highlighted, and alternative models to resolve some of the difficulties and negative outcomes associated with attrition proposed. The learning model is as yet unknown. It is assumed that the remedial process will be instrumental in reflecting the underpinnings of this model.

Alternative models to the model currently operating in FI will be examined in light of data from part one and findings in the literature. Models proposed will attempt to present solutions to the problems validated (highlighted, confirmed) in part one, will maintain a position that aligns itself with a concern for human interest, and will fulfil the expressed goal to protect the welfare of the child.

Limitations and Implications

The current study involves problem confirmation, model building, and the generation of solutions to identified problems. The data, methods, and procedures used are believed sufficient to satisfy this purpose.

The present study offers significant implications for further research, model development, and application. This research effort may prove to be highly significant for parents, educators, counsellors, school psychologists, administrators, and others associated with FI programs, but will prove singularly significant for those students who encounter academic difficulty in FI and are at risk of the negative outcomes associated with attrition from FI.

IV. PART ONE: RESULTS AND DISCUSSION

The analysis will be presented in the following sequence.

1. The demographic characteristics of the Successful group, the Unsuccessful group, and the grade one to six sample will be analyzed and presented.
2. The research questions will be stated, the findings reported, and statements which affirm or negate each question will be presented.

Demographic Characteristics

Characteristics of the Successful Group

Grade

Grade nine and 10 FI students met the criteria for the "Successful" FI student category. Students were not available beyond the grade 10 level at the time of data collection. Consequently, grade nine and 10 students fit the criteria of having completed a minimum of 10 years of FI (including ECS), which satisfied the required criteria of the "Successful" group. There were 22 students in grade nine (N=22) and 15 students in grade 10 (N=15) (Table 4).

Gender

There were thirteen females and nine males in grade nine, whereas there were five females and 10 males in grade 10 (Table 4). Combined, the Successful group had almost equivalent numbers of males (N-19) and females (N=18).

Table 4

Successful Students By Grade and Gender

		GRADE			
		9	10	f	Percent
GENDER	Male	9	10	19	51.4
	Female	13	5	18	48.6
		22	15	37	100.0

Age

The mean age of Successful students was 15.5 years with a range of 14.4 to 16.8 years. The mean age for grade nine students was 15 years, and the grade 10 mean was 16.2 years with a range of 15.3 to 16.8 years.

Entry Into FI

The majority of students in the Successful group entered FI in ECS (N=32) and comprised 86.5 percent of the group. The remainder entered FI in grade one (N=5) and comprised 13.5 percent of students.

French Spoken At Home; French Origin

Most students came from non-French speaking home environments (N=32) (86.5 percent) (Table 5). Five students came from homes in which French was spoken (13.5 percent) (Table 5). At least one parent was of French origin in 46 percent of homes; however, the majority of students came from homes of non-French origin (54 percent).

Table 5

Successful Students By French Spoken At Home/French Origin

		f	Percent
FRENCH SPOKEN AT HOME	Yes	5	13.5
	No	32	86.5
FRENCH ORIGIN	Mother	4	10.8
	Father	4	10.8
	Neither	20	54.1
	Both	9	24.3

Psychoeducational Assessment and Reason for Assessment

The majority of Successful students did not receive a psychoeducational assessment (N=27, 73 percent). Of 37 students, only 10 (27 percent) were assessed (Table 6). Of the 10 students who received a psychoeducational assessment, two were referred for emotional/behavioral reasons, four for enrichment, three for social/motivational concerns, and one for visual perceptual difficulties (Table 6). No student was referred for academic difficulty.

Table 6

Successful Students By Incidence of Psychoeducational Assessment and Reason for Assessment

		f	Percent
ASSESSED	Yes	10	27
	No	27	73
REASON FOR ASSESSMENT	Academic	-	-
	Emotion/behavior	2	5.4
	Enrichment	4	10.8
	Social/Motivation	3	8.1
	Visual	1	2.7

Cognitive Processing Weaknesses

Of 37 Successful students, two students (5 percent) had documented cognitive processing weaknesses (Table 7). One student had a memory weakness and the second student had a visual perceptual weakness (see chapter three for a description of variables and the means of assessment).

Table 7

Successful Students By Cognitive Processing Weaknesses

		f	Percent
PROCESSING WEAKNESSES	*Yes	2	5.4
	No	35	94.6
	Memory	1	2.7
	Visual	1	2.7

*Scores are based on 10 of 37 known scores and the assumption of "no deficit" for the remainder of students due to the lack of presenting symptomology (see chapter three).

Help Received

Help received refers to the academic assistance provided through the resource room, through retention, tutoring (provided privately by parents), and teacher aide assistance. Of the Successful students who received psychoeducational assessments (N=10, or 27 percent), assistance was provided by the resource room teacher (N=3) or a tutor (N=7) (Table 8). Three students received resource room help: two students received this help in grade two, and one student received this help for three consecutive years in grades one, two, and three. Seven students received tutorial help: five received this help in grade nine (three for math), one in grade eight, and one in grade three. Four of the 10 students were seen for enrichment.

Table 8

Successful Students By Help Received

		f	Percent
HELP RECEIVED	Yes	10	27
	No	27	73
TYPE OF HELP	Resource Room	3	8.1
	Retention	-	-
	Tutor	7	18.9
	Aide	-	-
WHEN RECEIVED	Grade 1	1	2.7
	Grade 2	3	8.1
	Grade 3	2	5.4
	Grade 4-7	-	
	Grade 8	1	2.7
	Grade 9 (3 in Math)	5	13.5

Intellectual Ability

The mean verbal intelligence quotient (I.Q.) for the Successful group was 112 with a standard deviation of 11 (Table 9). The mean nonverbal I.Q. was 113 with a standard deviation of 13. The Successful group is considered high average. Grade nine and 10 students were very similar.

Table 9

Mean Verbal and Nonverbal I.Q. for Successful Students

		Mean	sd
MEAN I. Q.	Verbal	111.73	11.24
	Nonverbal	113.31	13.32

Achievement Grades

The achievement grades of the Successful group were based on stanine scores. In the stanine system, a score of "4" is considered to be a conditional pass, "5" is considered to be a clear pass, and grades above or below these points are considered to be progressively better than average or failure scores respectively. On average, the Successful group obtained scores that fell well within the better than average range. Individual scores ranged from a stanine of three to a stanine of nine (Table 10). The Successful group was primarily comprised of high performers with the following exceptions noted. Two students received a stanine of three in French, one of whom also received a four stanine in Social Studies. In addition, four conditional passes were obtained in Math and one in French. Three grade 10 students obtained conditional passes in Math, whereas four grade nine students obtained the remaining low scores.

Table 10

Successful Students By Achievement Grades

	Math		French		English		Social St.		Science	
Group Mean	6.49		6.41		7.27		6.84		7.05	
	f	%	f	%	f	%	f	%	f	%
Stanine 3			2	5.4						
4	4	11	1	3			1	3		
5	7	19	6	16			3	8	3	8
6	8	22	7	19	7	19	5	14	10	27
7	5	14	13	35	17	46	20	54	10	27
8	11	30	8	22	9	24	8	22	10	27
9	2	5			4	11			4	11

Characteristics of the Unsuccessful Group

Grade

The Unsuccessful group exited from FI at various grade levels which ranged from grade one through grade eight with a mode of grade two. The largest proportion of students fell within grades one to three (71 percent) (Table 11). By grade six 97 percent of the group had exited FI. A single student transferred out of FI in grade 8.

Table 11

Unsuccessful Students By Exit Grade

		f	Percent
EXIT GRADE	Grade 1	6	17.6
	Grade 2	12	35.3
	Grade 3	6	17.6
	Grade 4	4	11.8
	Grade 5	1	2.9
	Grade 6	4	11.8
	Grade 7		
	Grade 8	1	2.9
		34	100.0

Gender

There were twenty-three males and eleven females that comprised the Unsuccessful group (Table 12). Males outnumbered females by over two-to-one.

Table 12

Unsuccessful Students By Gender

		f	Percent
GENDER	Male	23	67.6
	Female	11	32.4
		34	100.0

Age

The average age for the Unsuccessful group was slightly more than nine years (9.2 years), with a range of 6.8 years to 13.5 years.

Entry Into FI

The majority of subjects entered FI in ECS (N=33) and comprised 97 percent of the Unsuccessful group. A single individual entered FI in grade one (N=1) and comprised three percent of the group.

French Spoken At Home; French Origin

Most students came from non-French speaking home environments (N=31) (94 percent). Two students came from homes in which French was spoken (6 percent) (Table 13). Data were missing for one student. In 18 percent of homes both parents were of French origin (N=6). In nine percent of homes, the mother was of French origin (N=3). However, the majority of students were of non-French origin (73 percent) (Table 14).

Table 13

Unsuccessful Students By French Spoken At Home

		f	Percent
FRENCH SPOKEN AT HOME	Yes	2	6.1
	No	31	93.9
	Missing	1	.

Table 14

Unsuccessful Students By French Origin

		f	Percent
FRENCH ORIGIN	Mother	3	8.8
	Father	.	.
	Neither	24	72.7
	Both	6	18.2
	Missing	1	.

Psychoeducational Assessment and Reason for Assessment

The majority of Unsuccessful students received a psychoeducational assessment (N=33) and comprised 97 percent of the group (Table 15). One individual did not receive an assessment. Of the 33 students who received a psychoeducational assessment, 32 were referred for academic difficulty, one for both academic difficulty and emotional/behavioral concerns, and one for emotional/behavioral concerns alone. Unlike the Successful group, no students in the Unsuccessful group were referred for enrichment, social/motivational, or visual perceptual reasons (Table 15).

Table 15

Unsuccessful Students By Incidence of Psychoeducational Assessment and Reason for Assessment

		f	Percent
ASSESSED	Yes	33	97.1
	No	1	2.9
REASON FOR	Academic	33	94.1
ASSESSMENT	Emotion/behavior	*2	5.9

* N=1 Both academic and emotion/behavior reasons stated.

Cognitive Processing Weaknesses

Of 34 Unsuccessful students, 29 (85 percent) students had cognitive processing weaknesses (Table 16). Unsuccessful students also frequently had more than one processing weakness.

Table 16

Unsuccessful Students By Cognitive Processing Weaknesses

		f	Percent
PROCESSING	Yes	29	85.3
WEAKNESSES	No	5	14.7
	Language	15	44.1
	Verbal Reasoning	6	17.6
	Memory	24	70.6
	Visual	9	26.5
	Neurological	1	2.9

Help Received

Help received included resource room, retention, and tutoring assistance. Teacher aide time was not used. When difficulty was encountered, assistance was provided in all but two instances. One student, who exhibited verbal reasoning and memory weaknesses, and a second student who demonstrated memory weaknesses, had to date not received assistance. The remaining students (N=31, or 91 percent) were recipients of special help. Students were provided with a variety of methods across a combination of grades before drop-out (Table 17).

Table 17

Unsuccessful Students By Help Received

		f	Percent
HELP RECEIVED	Yes	31	91.2
	No	3	8.8
TYPE OF HELP	Resource Room	27	79.4
	Retention	15	44.1
	Tutor	3	8.8
	Aide	-	-
WHEN RECEIVED	ECS (Retention)	5	14.7
	Grade 1	13	38.2
	Grade 2	17	47.1
	Grade 3	6	17.6
	Grade 4	3	8.8
	Grade 5	1	2.9
	Grade 6	2	5.9

Intellectual Ability

The mean verbal intelligence quotient (I.Q.) for the Unsuccessful group was 98 with a standard deviation of 14 (Table 18). The mean nonverbal I.Q. was 103 with a standard deviation of 11. The Unsuccessful group is considered average functioning.

Table 18

Mean Verbal and Nonverbal I.Q. for Unsuccessful Students

		Mean	sd
MEAN I. Q.	Verbal	97.85	14.17
	Nonverbal	102.82	11.38

Achievement Grades

Achievement grades of the Unsuccessful group in the areas of English and French were assessed using the following groupings: (a) at grade level, (b) one-to-two years delayed, and (c) over two years delayed. The FIAT assessed French skills and the ERI assessed English skills. In French, no students were functioning at grade level, seven students were one-to-two years delayed (21 percent), and 27 students were over two years delayed (79 percent) (Table 19). In English, two students were functioning at grade level (6 percent), nineteen students were one-to-two years delayed (56 percent), and 13 students (38 percent) were over two years delayed (Table 19). The overwhelming majority of students were functioning well below grade level in both French and English.

Table 19

Unsuccessful Students By Achievement in French and English

	French		English	
ACHIEVEMENT LEVEL	f	Percent	f	Percent
at grade level	-	-	2	5.9
1-2 year delay	7	20.6	19	55.9
over 2 yr delay	27	79.4	13	38.2

Of 71 percent of students who had exited FI by grade three, 59 percent were over two years delayed in French. Of 82 percent who had exited FI by grade 4, 71 percent were over two years delayed in French, 32 percent were over 2 years delayed in English, and 50 percent were one-to-two years delayed in English. Academically, the Unsuccessful group were extremely low functioning.

When academic functioning was compared with processing weaknesses, the incidence of memory weakness was high when performance was over two years delayed in both French and English (71 percent). The incidence of language weakness was second in frequency (44 percent), and visual perceptual weaknesses were third in frequency (27 percent) (Table 20).

Table 20

Academic Achievement Compared With Processing Weaknesses

Over 2-Yr Delay French *f*	English *f*	Processing Weakness	*f*	Percent
13	8	Language	15	44.1
3	-	Verbal Reasoning	6	17.6
20	11	Memory	24	70.6
8	5	Visual	9	26.5
1	-	Neurological	1	2.9

Characteristics of the Grade One to Six Sample

Grade

Students in the sample ranged from grades one to six. The largest proportion of students fell within grades one to three (67 percent) (Table 21). The sample size corresponded with the population size at each division. The student numbers were reduced by half in grades four, five and six (division two). The sample was comprised of 12 students at each of grades one to three (N=36) and six students in each of grades four to six (N=18). An equal number of high, average, and low functioning students further subdivided each grade group.

Table 21

Grade One to Six Students By Grade

GRADE	f	Percent	High	Average	Low
Grade 1	12	22.2	4	4	4
Grade 2	12	22.2	4	4	4
Grade 3	12	22.2	4	4	4
Grade 4	6	11.1	2	2	2
Grade 5	6	11.1	2	2	2
Grade 6	6	11.1	2	2	2
	N=54	100.0	18 (33.3)	18 (33.3)	18 (33.3)

Gender

There were 22 males and 32 females that comprised the grade one to six sample (Table 22). Males comprised 41 percent of the sample, whereas females comprised 59 percent of the group.

Table 22

Grade One to Six Students By Gender

		f	Percent
GENDER	Male	22	40.7
	Female	32	59.3
		54	100.0

Age

The average age for the grade one to six sample was 8.4 years, with a range of 6.5 years to 11.3 years (Table 23).

Table 23

Mean Age By Grade for the Grade One to Six Students

Grade	Mean Age In Years
1	6.5
2	7.3
3	8.5
4	9.3
5	10.5
6	11.3
N=54	8.4 (Total Mean)

Entry Into FI

The majority of students entered FI in ECS (N=53) and comprised 98 percent of the group. A single individual entered FI in grade one (N=1) and comprised two percent of the group.

French Spoken At Home; French Origin

Most students in the grade one to six sample came from non-French speaking home environments (N=51) (94 percent), while three students came from homes in which French was spoken (6 percent) (Table 24). In 15 percent of homes both parents were of French origin (N=8). In thirty percent of homes, at least one parent was of French origin (N=16). The majority of students (56 percent) were of non-French origin (N=30) (Table 24).

Table 24

Grade One to Six Students By French Spoken At Home/French Origin

		f	Percent
FRENCH SPOKEN AT HOME	Yes	3	5.6
	No	51	94.4
FRENCH ORIGIN	Mother	10	18.5
	Father	6	11.1
	Neither	30	55.6
	Both	8	14.8

Referred And Received Psychoeducational Assessment

The majority of students (N=52) did not receive psychoeducational assessments and comprised 96 percent of the sample. Two students (4 percent) received assessments (Table 25).

Table 25

Grade One to Six Students By Incidence of Psychoeducational Assessment

		f	Percent
ASSESSED	Yes	2	3.7
	No	52	96.3

Reason for Assessment

Of the two students who received psychoeducational assessments, both were referred for academic difficulty. Neither student was referred for emotional/behavioral concerns, enrichment, social/motivational, or visual perceptual reasons. The grade one to six sample overall was comprised of average or better functioning students.

Cognitive Processing Weaknesses

Of 54 grade one to six students, two students (four percent) demonstrated cognitive processing weaknesses as determined by the methods described in chapter three (Table 26). One student demonstrated a visual perceptual weakness, and the second had both visual perceptual and memory weaknesses. Both students were in the low functioning category. No weaknesses were evident in language, verbal reasoning, or neurological skills.

Table 26

Grade One to Six Students By Cognitive Processing Weaknesses

		f	Percent
PROCESSING	Yes	2	3.7
WEAKNESSES	No	52	96.3
	Memory	1	1.9
	Visual	2	3.7

Help Received

Academic assistance included resource room, retention, tutoring (arranged privately by parents), and teacher aide assistance. Although only two students received psychoeducational assessments and had been diagnosed with cognitive processing deficits, nine students (17 percent) in total indicated they had received academic assistance at some point between grades one and six. All nine students received resource room assistance, one student was retained, and one received the assistance of a tutor. Most help was received prior to grade four. Students who were recipients of special help had assistance provided through a combination of methods across a combination of grades (Table 27).

Table 27

Grade One to Six Students By Help Received

		f	Percent
HELP RECEIVED	Yes	9	16.7
	No	45	83.3
TYPE OF HELP	Resource Room	9	16.7
	Retention	1	1.9
	Tutor	1	1.9
	Aide	-	-

(...Cont'd)

Table 27 (Cont'd...)

Grade One to Six Students By Help Received

WHEN RECEIVED	ECS	-	-
	Grade 1	1	1.9
	Grade 2	7	13.0
	Grade 3	4	7.4
	Grade 4	1	1.9
	Grade 5	-	-
	Grade 6	-	-
SPECIFIC STUDENT HELP		GRADE	f
Resource		1, 2	1
Resource, retain, tutor		2	1
Resource		2	3
Resource		3	2
Resource		2, 3	1
Resource		2, 3, 4	1

Intellectual Ability

The mean verbal intelligence quotient (I.Q.) for the grade one to six sample was 110 with a standard deviation of 15 (Table 28) and a range of 84 to 150. The mean nonverbal I.Q. was 107 with a standard deviation of 14, and a range of 77 to 134. The grade one to six sample is considered high average in verbal ability and average in nonverbal ability. Grade two students were particularly high functioning having received an average verbal I.Q. of 120.

Table 28

Mean Verbal And Nonverbal I.Q. For Grade One to Six Students

	VERBAL I.Q.		NONVERBAL I.Q.	
GRADE	Mean	sd	Mean	sd
1	103.92	15.21	-	
2	120.33	16.85	-	
3	108.25	9.95	109.33	12.03
4	104.33	10.99	100.00	21.19
5	115.17	8.04	104.83	10.91
6	109.00	18.62	111.83	11.62
Total	110.39	14.75	107.07	13.94

Achievement Grades

The achievement grades of grade one to six students were assessed using stanine scores. The letter grades from grades one to three were converted to stanine scores based on teacher specified equivalencies (see chapter three and Appendix A). In the stanine system, a grade of "4" is a conditional pass, "5" is a clear pass, and grades above or below these points are considered progressively better than average or failure grades respectively. On average, students obtained scores that fell well within the better than average range. Scores overall ranged from a mean stanine of 6 to a mean stanine of 8.2 (Table 29). Of 54 students across six grades, only four students received conditional passes. Two grade two students each received conditional passes in two subject areas (one in Math and English, the second in French and English). One grade three student received a conditional pass in French and English. One grade four student received a conditional pass in Social Studies. All four students fell within the low functioning range. Overall, the sample was high functioning.

Table 29

Grade One To Six Students By Achievement Grades

		MEAN STANINE SCORES				
		Math	French	English	Soc.St.	Science
	Total	7.41	6.76	6.95	7.43	7.4
GRADE	1	7.4	7.3	-	-	-
	2	6.9	6.0	6.3	-	-
	3	7.3	6.8	7.3	7.7	7.6
	4	7.7	7.0	7.0	6.8	7.0
	5	8.0	7.2	7.5	8.2	7.5
	6	7.7	6.5	7.2	6.8	7.3

Analysis

Research Questions and Findings

RESEARCH QUESTION I

Research Question: Can Successful and Unsuccessful FI students be differentiated on the basis of academic/clinical data?

Findings:

Successful and Unsuccessful FI students were compared across twelve variables. Each variable demonstrated marked differentiation of the two groups. A one way ANOVA was used to contrast differences between verbal and nonverbal intelligence quotients (Table 30). Verbal and nonverbal I.Q. differences were significant. Successful FI students had significantly higher intelligence quotients in both verbal and nonverbal domains than Unsuccessful FI students.

Table 30

One Way ANOVA of Successful and Unsuccessful I.Q. Means

	*VERBAL I.Q.	*NONVERBAL I.Q.
SUCCESSFUL	112	113
UNSUCCESSFUL	98	103

* $p<.01$

Cognitive processing weaknesses were detected in two of 37 (five percent) Successful students, whereas 29 of 34 (85 percent) Unsuccessful students demonstrated one or more cognitive processing weaknesses (Table 31). Consequently, each of five cognitive processing skills differentiated the groups.

With respect to psychoeducational assessment, 33 of 34 students within the Unsuccessful group were referred and assessed, and the reason for assessment was predominantly academic difficulty (94 percent) (Table 32). There were two instances of emotional/behavioral reasons cited (six percent). In contrast, 10 students (27 percent) within the Successful

Table 31

Successful and Unsuccessful Students By Cognitive Weaknesses

		SUCCESSFUL		UNSUCCESSFUL	
		f	Percent	f	Percent
	Weaknesses:	*(2)	5	(29)	85
COGNITIVE PROCESSING SKILLS	Language	-		(15)	44
	Verbal Reasoning	-		(6)	18
	Memory	(1)	3	(24)	71
	Visual	(1)	3	(9)	27
	Neurological	-		(1)	3

*Successful scores are based on 10 of 37 known scores and the assumption of "no deficit" for the remainder of students due to the lack of presenting symptomology.

group were assessed with a psychoeducational battery of tests. The proportion of Successful students was much smaller. A more pronounced differentiation of the two groups was that reasons for assessment in the Successful group did not include academic difficulty (Table 32). Rather, reasons included enrichment (N=4), social-motivational (N=3), emotional-behavioral (N=2), and visual perceptual concerns (N=1).

Table 32

Successful and Unsuccessful FI Students By Incidence of Assessment and Reason for Assessment

		SUCCESSFUL		UNSUCCESSFUL	
		f	Percent	f	Percent
ASSESSMENT:	Yes	(10)	27	(33)	97
	No	(27)	73	(1)	3
REASONS:	Academic	-	-	(33)	94
	Emotional/behavioral	(2)	5	(2)	6
	Enrichment	(4)	11	-	
	Social/Motivational	(3)	8	-	
	Visual	(1)	3	-	

Remedial assistance was provided for 10 students (27 percent) within the Successful group, and was accessed predominantly through a tutor (N=7) and secondly through resource room assistance (N=3) (Table 33). In contrast, assistance was provided for thirty-one (91 percent) of the Unsuccessful group and often spanned several assistance methods and several grades. Assistance for the Successful group also included four cases of enrichment.

Table 33

Successful and Unsuccessful Students By Help Received

		SUCCESSFUL		UNSUCCESSFUL	
		f	Percent	f	Percent
HELP RECEIVED	Total	(10)	27	(31)	91
	Resource	(3)	8	(27)	79
	Retain	-		(15)	44
	Tutor	(7)	19	(3)	9
	Aide	-		-	

A marked difference between the two groups was seen in academic achievement. French and English scores were available for both groups; therefore, these subject areas exclusively were contrasted. Scores for the Unsuccessful group were derived from ERI and FIAT scores. Scores for the Successful group were derived from stanine scores. The stanine of "4" is considered equivalent to grade level; however, the stanine of "3" is not equivalent to "one-to-two years delayed." Therefore, to permit a comparison, a "3" stanine will be described as "somewhat delayed."

In French, 95 percent of the Successful group functioned at or above grade level, whereas 100 percent of the Unsuccessful group functioned well below grade level. In English, 100 percent of the Successful group functioned well above grade level, whereas 94 percent of the Unsuccessful group functioned well below grade level. The Successful group was unquestionably higher functioning in French and English academic achievement in comparison to the Unsuccessful group (Table 34).

Table 34

Successful and Unsuccessful Students By French and English

			SUCCESSFUL		UNSUCCESSFUL	
	CATEGORY	STANINE	f	Percent	f	Percent
FRENCH	Over 2-yr delay		-		(27)	79
	1 to 2-yr delay		-		(7)	21
	Somewhat delayed	3	(2)	5	-	
	At grade level	4	(1)	3	-	
		5	(6)	16	-	
		6	(7)	19	-	
		7	(13)	35	-	
		8	(8)	21	-	
		9	-		-	
ENGLISH	Over 2-yr delay		-		(13)	38
	1 to 2-yr delay		-		(19)	56
	Somewhat delayed	3	-		-	
	At grade level	4	-		(2)	6
		5	-		-	
		6	(7)	19	-	
		7	(17)	46	-	
		8	(9)	24	-	
		9	(4)	11	-	

Based on findings across each of 12 variables, there were sufficient differences between the two groups to clearly differentiate Successful from Unsuccessful students. Therefore, Research Question I is answered in the affirmative: Successful and Unsuccessful FI students can be differentiated on the basis of academic/clinical data.

RESEARCH QUESTION II

Research Question: Can teacher perceptions of high, average, and low functioning FI students be supported by independent test scores?

Findings:

High, average, and low functioning grade one to six students were collapsed across grades. The three groups were compared across 12 variables (seven variables, five pretests). A one way ANOVA was performed twelve times (Table 35).

Teacher perceptions of high, average and low performers were supported by independent test scores on nine of twelve variables. Teacher perceptions were significant at $p<.01$ on Verbal I.Q., Math, French, English, FIAT spelling, FIAT word identification, FIAT passage comprehension, and Curriculum Based spelling and word identification subtests. Teacher perceptions were not supported in the areas of Nonverbal I.Q., Social Studies, or Science. The pattern of higher functioning students performing better than lower functioning groups was generally maintained across all variables; however, on the latter three variables the differences between groups were insignificant. Therefore, Research Question II is answered

Table 35

Cell Means for High, Average, and Low Functioning FI Students Across 12 Variables (Includes 5 Pretests) - 12 One Way ANOVAs

	*Verbal I.Q.	Nonverbal I.Q.	*Math	*French	*English	Social Studies
HIGH	120	115	8.2	7.8	8.2	8.4
AVERAGE	110	103	7.4	6.8	6.9	7.5
LOW	102	102	6.7	5.7	5.7	6.4

	Science	*FIAT [1]sp-1	*FIAT wi-1	*FIAT pc-1	*CURR sp-1	*CURR wi-1
HIGH	8.1	64.8	72.5	73.4	67.1	86.8
AVERAGE	7.4	40.2	54.3	52.9	53.5	78.6
LOW	6.7	9.9	15.7	29.6	27.2	54.3

---

* $p<.01$

[1] sp=spelling, wi=word identification, pc=passage comprehension

inconsistently. Teachers were accurate in their perceptions of high, average, and low functioning FI students across nine of twelve variables; however, for three variables teacher perceptions were not supported by independent test scores.

RESEARCH QUESTION III

Research Question: Will high, average, and low functioning FI students make different academic gains across five repeated measures?

Findings:

Grade one to six FI students were collapsed across grades into three groups: high, average, and low functioning (based on teacher nominations as described in chapter three). A two

Table 36

Cell Means for High, Average, and Low Functioning FI Students - Two Way ANOVA With Repeated Measures

	FIAT						CURR			
	[*]Spelling		Word [*]Identification		Passage [*]Comprehension		[**]Spelling		Word [**]Identification	
	Pre	Post	Pre	Post	Pre	Post	Pre	Post	Pre	Post
	(41)	(41)	(53)	(53)	(41)	(41)	(41)	(41)	(52)	(52)
HIGH	65	74	73	65	73	63	67	84	87	98
AVERAGE	40	41	54	39	53	50	54	75	79	95
LOW	10	9	16	12	30	20	27	51	54	78

[*] $p<.01$ between group differences

[**] $p<.01$ between group differences and pre-posttest differences

way ANOVA with repeated measures was used to determine high, average, and low academic gains across three repeated measures of the FIAT and two repeated measures of the Curriculum Based subtests (Table 36). Gains of the three groups and pre-post gains (fall to spring) with the groups collapsed were analyzed. Differences between groups were significant at p<.01 on the FIAT subtests, but pre and post gains were not significant. Group differences were significant across the Curriculum Based subtests at p<.01 and pre-posttest differences were also significant at p<.01. Consequently, the high functioning group scored consistently higher than the average group, which in turn scored consistently higher than the low group (between group differences). This pattern was maintained across the five repeated measures. The three groups were clearly differentiated across each repeated measure. When the three groups were collapsed, pre- and posttest gains were significant only for the Curriculum Based subtests. Grade differences were noted. Grade two appeared to be strong overall. There also seemed to be a ceiling effect on the Curriculum word identification subtest. That is, the 94th percentile or higher was quickly reached, and scores were subsequently maintained at this plateau. The ceiling effect and lack of pre-post interaction on the FIAT subtests could be functions of the tests themselves; however, the reason there was no interaction is speculative. Therefore, Research

Question III is answered inconsistently: high, average, and low functioning groups collapsed made different academic gains across the Curriculum Based spelling and word identification subtests, but not across the FIAT subtests.

RESEARCH QUESTION IV

Research Question: Will FI students become more homogeneous across grades one to six?

Findings:

Grade one to six high, average, and low functioning FI students were compared across grades. A two-way ANOVA was used to assess group differences across six grades (Table 37). Students were compared across twelve variables, including five posttests. There were two main effects, both of which were expected: higher grade level students performed better than lower grade students; and high functioning students performed better than low functioning students. For example, Verbal I.Q. clearly differentiated high, average, and low functioning FI students (Table 37). Grade by group interaction, however, was insignificant. As students progressed from grades one to six, variance did not decrease in a systematic pattern that would have supported progressive homogeneity. Consequently, between group differences and grade differences were evident, but grade-group interaction was not evident. Random, rather than progressive, patterns of scores were seen (e.g., FIAT passage comprehension, Curriculum spelling). Results revealed group differences and grade differences, but no systematic pattern toward progressive homogeneity. There was interaction on the Curriculum word identification subtest; however, the ceiling effect produced such little variance that the interaction did not have meaning. Because of the nature of the subtest, all students performed well. Therefore, progressive homogeneity was not supported. Consequently, Research Question IV is answered in the negative: grade one to six FI students did not become more homogeneous as they progressed to grade six.

While research question IV seemed like a good question from the literature, the limitations of the FIAT and Curriculum tests made answering this question difficult (unclear norming, few students available from higher grades in the norm sample which resulted in the entire population being used, lack of alternative measures). There were also too few subjects per cell to enable an ANOVA. Moreover, there were lost subjects (N=49) from the previous year which would have conceivably comprised the low functioning group had they remained in the program. While it is true that much data were retained through the Unsuccessful group, no FIAT or Curriculum subtest data from these individuals were available. Because of these difficulties little fluctuation across grades was seen.

TABLE 37

Group Means of High, Average, and Low Functioning FI Students Across 12 Variables (Includes Five Posttest Scores) - Two Way ANOVA

FIAT - Spelling Posttest

	Grade 1	2	3	4	5	6
HIGH	-	76.8	77.5	76.0	63.0	73.0
AVERAGE	-	50.5	30.0	24.0	63.5	38.5
LOW	-	13.3	3.3	11.5	15.0	10.0
Mean	-	47	37	37	47	41

FIAT - Word Identification Posttest

	Grade 1	2	3	4	5	6
HIGH	69.5	71.5	30.3	85.0	89.5	70.5
AVERAGE	8.0	71.3	7.5	41.0	52.5	82.0
LOW	14.0	17.8	0.5	1.0	15.5	35.5
Mean	31	54	13	42	53	63

FIAT - Passage Comprehension Posttest

	Grade 1	2	3	4	5	6
HIGH	-	90.3	51.0	82.0	37.0	40.5
AVERAGE	-	78.0	33.3	30.5	61.5	32.5
LOW	-	34.5	12.0	7.0	10.5	24.0
Mean	-	68	32	40	36	32

CURRICULUM - Spelling Posttest

	Grade 1	2	3	4	5	6
HIGH	-	94.5	77.5	89.0	70.0	81.5
AVERAGE	-	91.3	70.3	66.5	72.0	62.0
LOW	-	73.3	41.8	48.0	41.0	36.5
Mean	-	86	63	68	61	60

CURRICULUM - Word Identification Posttest

	Grade 1	2	3	4	5	6
HIGH	97.8	99.0	96.8	99.0	96.0	96.5
AVERAGE	91.0	98.5	95.3	92.0	94.0	93.0
LOW	85.3	85.5	48.5	91.5	89.0	92.5
Mean	91	94	80	94	93	94

VERBAL I.Q.

	Grade 1	2	3	4	5	6
HIGH	113	126	117	114	119	124
AVERAGE	102	129	112	105	110	106
LOW	97	107	96	95	118	97
Mean	104	120	108	104	115	109

NONVERBAL I.Q.

	Grade 1	2	3	4	5	6
HIGH	-	-	120	120	93	126
AVERAGE	-	-	103	97	105	108
LOW	-	-	105	84	117	102
Mean	-	-	109	100	105	112

MATH

	Grade 1	2	3	4	5	6
HIGH	8.3	7.8	8.3	9	8	8
AVERAGE	7	6.8	7.5	9	8	8
LOW	7	6.3	6.3	6	8	7
Mean	7.4	6.9	7.3	7.7	8	7.7

FRENCH

	Grade 1	2	3	4	5	6
HIGH	8.3	7.3	8.3	8	7	7.5
AVERAGE	6.8	6	7	7.5	8	6.5
LOW	6.8	4.8	5.3	5.5	6.5	5.5
Mean	7.3	6	6.8	7	7.2	6.5

ENGLISH

	Grade 1	2	3	4	5	6
HIGH	-	8	8.8	8.5	7.5	8
AVERAGE	-	6	7	7	8	7.5
LOW	-	4.8	6	5.5	7	6
Mean	-	6.3	7.3	7	7.5	7.2

SOCIAL STUDIES

	Grade 1	2	3	4	5	6
HIGH	-	-	8.8	8.5	8.5	7.5
AVERAGE	-	-	7.5	7.5	8.5	6.5
LOW	-	-	6.8	4.5	7.5	6.5
Mean	-	-	7.7	6.8	8.2	6.8

SCIENCE

Grade	1	2	3	4	5	6
HIGH	-	-	9	7.5	6.5	8.5
AVERAGE	-	-	7	7.5	8.5	7
LOW	-	-	6.8	6	7.5	6.5
Mean	-	-	7.6	7	7.5	7.3

RESEARCH QUESTION V

Research Question: Will high functioning grade one to six students resemble the Successful group, and low functioning grade one to six students resemble the Unsuccessful group?

Findings:

Successful students markedly resembled the high functioning grade one to six students (Table 38). The majority of students from both groups began FI in ECS, came from homes which were non-French speaking, and were non-French in origin. Neither group was comprised of students who had been referred for academic difficulty, verbal and nonverbal intelligence quotients were high average, and the incidence of processing weaknesses was negligible. No student in the high functioning group demonstrated processing weaknesses, and only two students in the Successful group demonstrated a processing weakness. No students in either group were referred for academic difficulty, nor did students receive retention, or aide time.

Differences between high functioning grade one to six students and Successful students were evident in incidence of psychoeducational assessment. While none of the high functioning group received assessments, 10 (27 percent) of the Successful group received assessments. Assessment for four students was for enrichment purposes. Assessment reasons for the remaining six students included emotional-behavioral, social-motivational, and visual perceptual reasons. Differences were also evident in help received: while none of the high functioning group received help, 27 percent of the Successful group received resource room help (8 percent) and tutorial help (19 percent). Included, however, were four instances of enrichment. Performance in Science, English, Math, French, and Social Studies also differed somewhat. High functioning grade one to six students performed on average about one to one and a half stanines better than the Successful group. Academic achievement for the Successful group was in the high average range, and for the high functioning group in the range of excellence. Overall, however, both groups could be described as high functioning.

The Unsuccessful group was markedly lower functioning in comparison to low functioning grade one to six students (Table 39). Similarities included commencement of FI in ECS, origin from families which were non-French speaking and non-French in origin, and average verbal and nonverbal intelligence quotients. Here the similarities ceased. Low functioning

Table 38

Comparisons of High Functioning Grade One To Six FI Students and Successful FI Students

	ECS ENTRY	No French In Home	French Origin	Verbal I.Q.	Nonverbal I.Q.	English	Science
HIGH	94%	94	Mother 11% Father 17 Neither 55 Both 17	120	115	8.2	7.9
SUCCESSFUL	87	87	Mother 11 Father 11 Neither 54 Both 24	112	113	7.3	7.1

	Psychoeduc. Assessment	Reason for Assessment	Processing Weaknesses	Memory	Visual	Help Received
HIGH	00	Academic 00 Emot/Beh 00 Enrichmt 00 Psyche/Motiv 00 Visual 00	00	00	00	00
SUCCESSFUL	27%	Academic 00 Emot/Beh 5% Enrichmt 11 Psyche/Motiv 8 Visual 3	5%	3%	3%	27%

(...Cont'd)

Table 38 (Cont'd...)

Comparisons of High Functioning Grade One To Six FI Students and Successful FI Students

	When Helped	Type of Help Received				Academic Achievement		
		Resource	Tutor	Retain	Aide	Math	French	Social St
HIGH	N/A	00	00	00	00	8.2	7.7	8.3
SUCCESSFUL	Gr. 1 3% 2 8 3 5 8 3 9 14	8%	19%	00	00	6.5	6.4	6.8

grade one to six students and Unsuccessful students differed in academic achievement, incidence of psychoeducational assessment, reason for assessment, remedial assistance, and incidence of cognitive processing weaknesses. Students in the Unsuccessful group performed at significantly delayed levels. In French, no student in the Unsuccessful group performed at grade level, 21 percent functioned at a one-to-two year delays, and 79 percent of students functioned at over two-year delays. In English, six percent of the Unsuccessful group performed at grade level, 56 percent performed at one-to-two year delays, and 38 percent performed at over two-year delays. In contrast, the low functioning group received a mean of 5.9 on the stanine scale in English, and a mean of 5.7 in French. Unsuccessful students and low functioning students were referred for psychoeducational assessments; however, while eleven percent of the low group were assessed, 97 percent of the Unsuccessful group were assessed. Reasons for assessment and incidence of remedial help also indicated the Unsuccessful group was markedly more problematic. While eleven percent of the low functioning students were referred for academic difficulty, 94 percent of Unsuccessful students were referred for academic difficulty and six percent for emotional/behavioral concerns. The Unsuccessful group made far greater use of the resource room, tutoring, and retention. The incidence of processing weaknesses was also excessive in contrast with the low group. Although eleven percent of low students demonstrated weaknesses in memory and visual skills, 85 percent of the Unsuccessful group demonstrated cognitive processing weaknesses and often several weaknesses were evident in a single student. Cognitive processing weaknesses were evident in the Unsuccessful group in each area assessed: language, verbal reasoning, memory, visual perceptual, and neurological impairment. Therefore, findings would suggest that Research Question V is answered in both the affirmative and in the negative: high functioning grade one to six students resemble the Successful group, whereas low functioning grade one to six students do not resemble the Unsuccessful group.

Table 39

Comparisons of Low Functioning Grade One To Six FI Students and Unsuccessful FI Students

	ECS ENTRY	No French In Home	French Origin	Verbal I.Q.	Nonverbal I.Q.	English	French
LOW	100%	89	Mother 28% Father 11 Neither 50 Both 11	102	102	Stanine Mean 5.9	5.7
UNSUCCESSFUL	97	94	Mother 9 Father -- Neither 73 Both 18	98	103	Grade level 6% 1-2 yrs del 56 2+ yrs delay 38	-- 21 79

	Psychoeduc. Assessment	Reason for Assessment	Processing Weaknesses	Lang.	V.Reas.	Mem.	Vis.	Neuro.
LOW	11%	Academic 11% Emot/Beh 00 Enrichmt 00 Psyche/Motiv 00 Visual 00	11%	-	-	5%	11%	-
UNSUCCESSFUL	97%	Academic 94% Emot/Beh 6 Enrichmt 00 Psyche/Motiv 00 Visual 00	85%	44%	18	71%	27%	3%

(...Cont'd)

Table 39 (Cont'd...)

Comparisons of Low Functioning Grade One To Six FI Students and Unsuccessful FI Students

	Help Rec'd	When		Resource	Tutor	Retain	Aide
LOW	50%	Gr. 1	5%	50%	-	-	-
		2	39				
		3	22				
		4	5				
UNSUCCESSFUL	91%	ECS	15%	79%	9%	44%	-
		Gr. 1	3				
		2	8				
		3	5				
		8	3				
		9	14				

V. PART TWO: IMPLICATIONS FOR MODEL BUILDING

The terms "model" and "theory" have been used in the literature at times interchangeably and at other times distinctly (Thomas, 1979). Consequently, confusion with the use of these terms has necessitated an explanation when one term is selected.

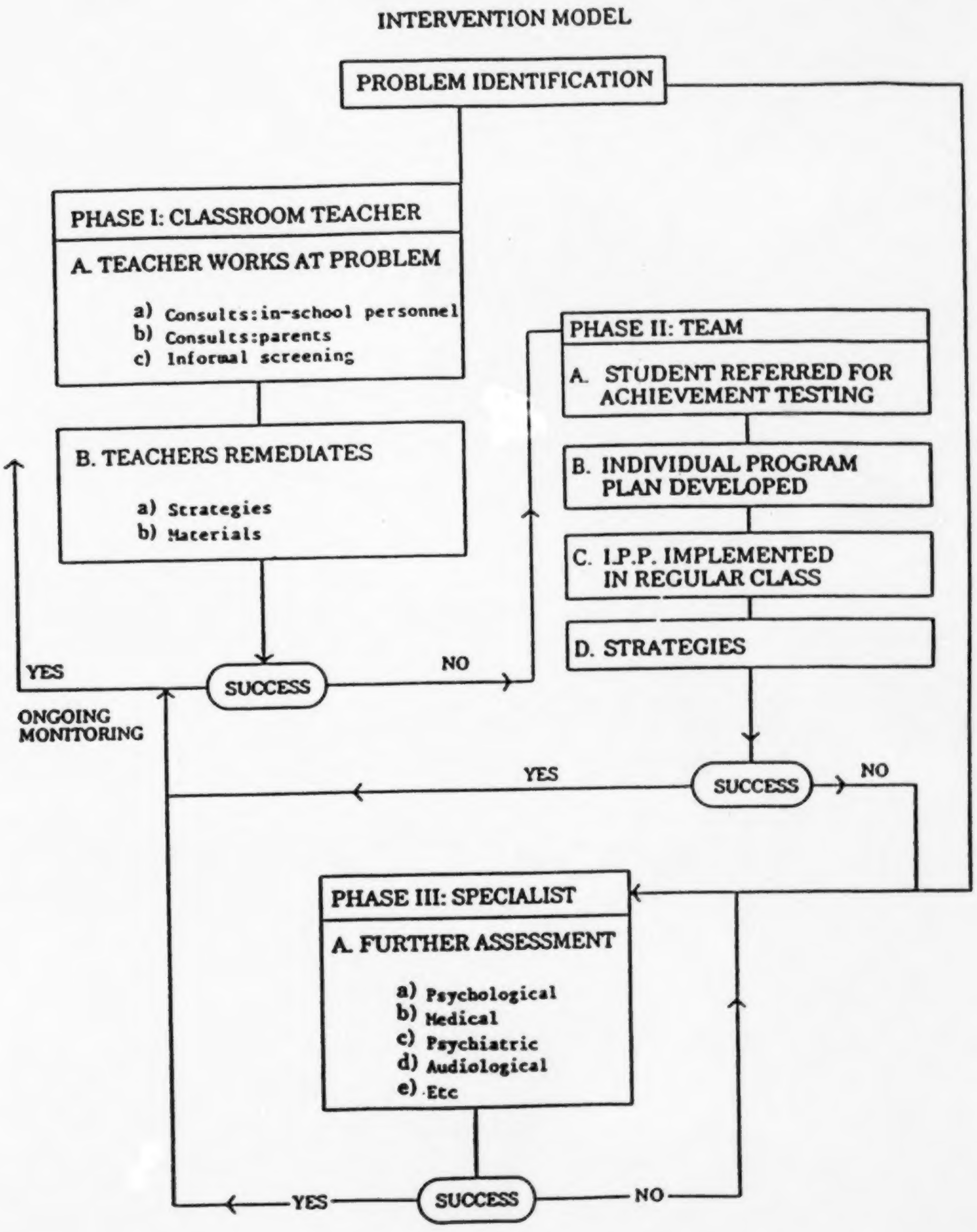
"Theory" is a formal set of ideas that uses rhetoric and speculation to put forth a probable explanation of nature. A theory might reflect little fact or evidence and may often be untestable. An example is the theory of evolution. Certain facts confirm the theory of evolution, such as the discovery of neanderthal skeletal remains. Other facts refute the theory, such as the continued existence of apes today. Consequently, the theory cannot be conclusively proved or disproved. The debate between believers in Creation and supporters of Evolution continues. Without clear validation, the theory is believed or disbelieved on the basis of one's personal bias (Patterson, 1980; Thomas, 1979). A model, in contrast, is nonspeculative and rooted in fact.

A "model" is a graphic representation of the relationships among variables in a process or procedure (Thomas, 1979). Models depict a pattern of events that occur with such regularity and consistency that they impart a certain predictability. There exist a variety of models that range from simple to complex. There is a model for driving a car, growing corn, and learning to play the piano. These models consist of steps that are fairly consistent, identifiable and predictable.

Complex models include: teaching models, learning models, remedial models, models of government, and the medical model. An example of a complex model is the graphic representation of intervention within a local school district (Figure 2). A student problem is identified, the regular classroom teacher implements remedial strategies. If unsuccessful the student is referred for achievement testing, remedial strategies are implemented. If the problem persists the student is referred for psychoeducational assessment, remedial strategies are once again implemented, monitored, and placement decisions are made. The process is consistent, observable, and predictable. Within complex models are often subsets of models. Usually it is not argued whether the model itself exists. Rather, it is argued whether a particular model is appropriate for a particular situation.

In this section, French Immersion (FI) education and special education models will be identified, FI models will be compared with those of the English stream, and the shortcomings within each remedial model will be articulated. Particular attention will be paid to the negative ramifications of the FI Remedial Model for FI students. Solutions in the form of alternative models will be proposed. The ramifications of these changes will be highlighted and the pros and cons in making such changes will be critically examined.

Figure 2. Intervention Model in a Local School District


INTERVENTION MODEL
PROBLEM IDENTIFICATION
PHASE I: CLASSROOM TEACHER
A. TEACHER WORKS AT PROBLEM
a) Consults:in-school personnel
b) Consults:parents
c) Informal screening
B. TEACHERS REMEDIATES
a) Strategies
b) Materials
SUCCESS
YES
NO
ONGOING MONITORING
PHASE II: TEAM
A. STUDENT REFERRED FOR ACHIEVEMENT TESTING
B. INDIVIDUAL PROGRAM PLAN DEVELOPED
C. I.P.P. IMPLEMENTED IN REGULAR CLASS
D. STRATEGIES
SUCCESS
YES
NO
PHASE III: SPECIALIST
A. FURTHER ASSESSMENT
a) Psychological
b) Medical
c) Psychiatric
d) Audiological
e) Etc
SUCCESS
YES
NO

English and FI Educational Models

Fundamentally, English and FI educational streams are considered parallel. The two streams of education adhere to comparable academic and cognitive goals (Alberta Education, 1987b; 1990; Genesee, 1987), the grade systems are parallel, and special education programs are in place to meet the needs of special students. However, differences are evident. Three obvious differences include selectivity on the part of students, language of instruction, and the presence of two secondary goals in FI: to learn French, and to develop an understanding and appreciation for the French and French Canadian cultures. A fourth, less apparent difference is with respect to the special education models.

Selectivity

Selectivity, or the option to provide or receive services within the student-school relationship, impacts upon staff and student behavior and has tangible consequences (Carlson, 1964). Carlson asserted that in English public schools, teachers have no control over which students enter their classrooms, and students must attend. Attendance is mandatory and enforced by truancy legislation in section nine of the Alberta School Act of 1988 (Province of Alberta, 1988). By contrast, FI has partial selectivity. Teachers have no control over which students enter their classrooms; however, student enrolment in FI is by choice. If students select FI and later change their minds about participation, they may also easily exit the program.

Carlson (1964) called English public schools "domesticated" organizations stating, "there is no struggle for survival for this type of organization.... Existence is guaranteed" (p. 266). There is no shortage of members in English schools, and "quality of service" has minimal impact on receipt of funds. Student response to the lack of selectivity comprises, at its extremes, "receptive adaptation" (acceptance of services and compliance with methods) and "drop-out adaptation" (Carlson, 1964). Therefore, a consequence of the lack of selectivity is that students may be minimally motivated if they do not desire the services provided, which could cause "goal displacement."

Adaptive mechanisms with which public schools overcome goal displacement include: segregation (tracking or exclusion), and "preferential treatment of some students" (Carlson, 1964). Segregation occurs through the referral-assessment-placement process that leads to special education. Preferential treatment is the recognition (through various honors, awards, and praise) of students who foster goal achievement. Preferential treatment is intended to motivate other students to attain similar goals. However, difficulties arise when preferred goals are unattainable for students who are unable to excel through traditional means.

In FI, the problem of unselected students is overcome through two distinct avenues: "passive recruiting" and "systematic tracking" (Olson, 1983). Passive recruiting refers to the initial lure of middle- and upper-class families to FI, which results in a more homogeneous and advantaged group of students with respect to socio-economic status (SES), aptitude, I.Q., and incidence of problems than found in the English stream (Carey, 1984; Lambert & Tucker, 1972; Olson, 1983). Systematic tracking is the systematic exclusion of less preferred members from FI, similar to Carlson's "segregation." Olson (1983) stated, "high achievement levels are sometimes mandatory before one is allowed to enroll or continue in the program" (p. 86). According to Carlson, this type of organization must vie for services and "struggle for survival." "Support...is closely tied to quality of performance, and a steady flow of clients is not assured" (Carlson, 1964, p. 267). Accordingly, the consequences of an unselected student population are more problematic for this type of organization. Schools must counter the lack of selectivity, minimize goal displacement, and achieve program success to an even greater degree than in the English stream.

Second Language as the Vehicle for Learning

Whereas the English language is used almost exclusively as the vehicle for learning in the English stream, French (the second language) is used as the primary vehicle for learning in FI (Alberta Education, 1987b; 1990; Government of Alberta, 1988). At the primary level, teachers are required to be creative and animated to communicate meaning to students through the second language (Weber & Tardif, 1987). In later grades, once French has been established, the French language is used jointly with English in the instruction of the curriculum. Consequently, the second language (French) is not taught directly as a subject area, but is taught incidentally as the vehicle of instruction (refer to chapter two for a more thorough explanation of FI methodology).

Two Additional FI Goals

French language acquisition and the development of an understanding of French and French Canadian cultures are two secondary goals in FI (Alberta Education, 1987b; Genesee, 1987). These language and cultural differences are largely recognized and documented.

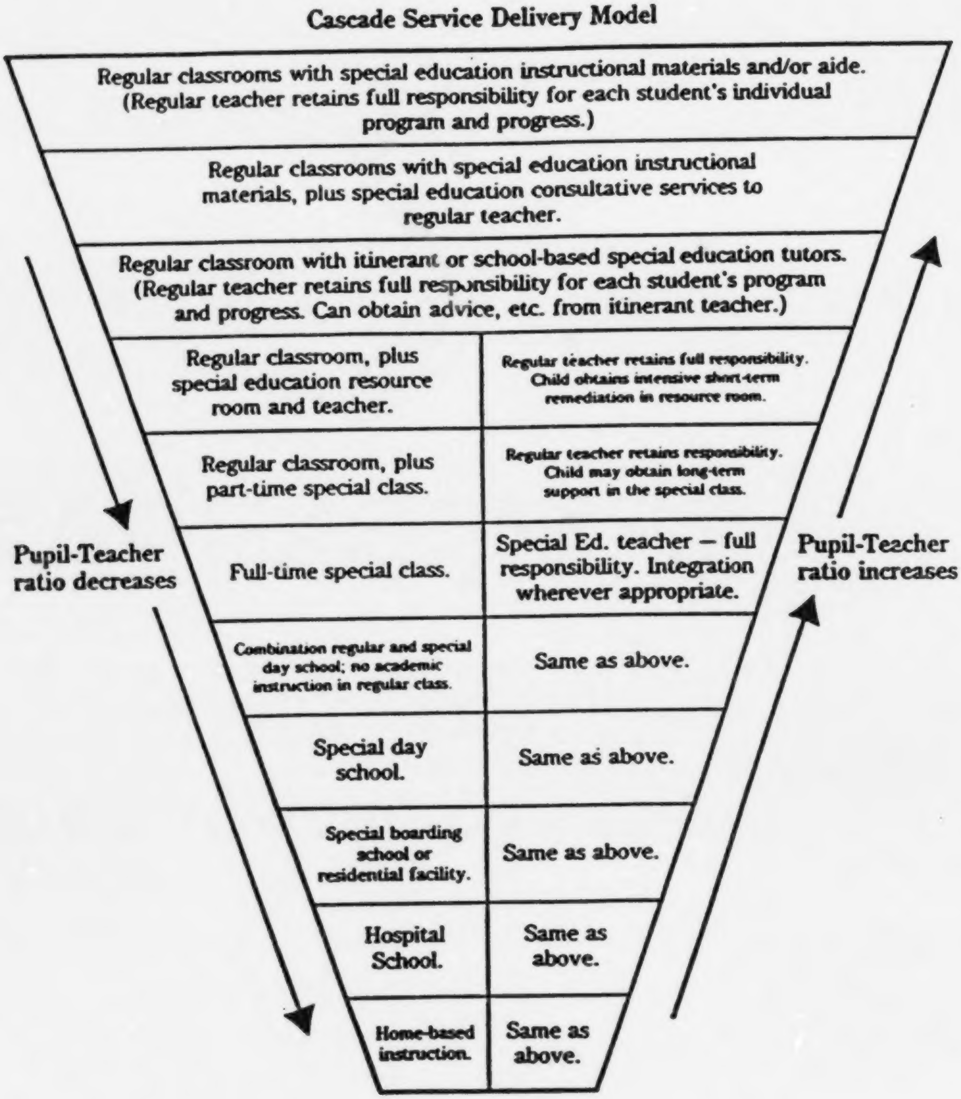
Special Education Models

The special education models of the FI and English streams differ substantially. A readily apparent difference is in the number of special education alternatives available and in the overriding philosophy applied. To facilitate a contrast of the models, the English stream remedial model will be described, the FI model identified, and the similarities and differences between the two models highlighted.

English Special Education Model

The established special education model in the English stream is the Cascade Service Delivery Model (Figure 3). The Cascade Service Delivery Model, developed by Reynolds and Deno (Alberta Education, 1986; Deno, 1970), provides extensive special education services. Services range from minimal intensity environments, such as the adjustment of instruction and materials within the regular classroom, to highly restrictive environments, such as home-based instruction.

Figure 3. Cascade Service Delivery Model (Reynolds & Deno in Alberta Education, 1986).



Cascade Service Delivery Model

Regular classrooms with special education instructional materials and/or aide. (Regular teacher retains full responsibility for each student's individual program and progress.)

Regular classrooms with special education instructional materials, plus special education consultative services to regular teacher.

Regular classroom with itinerant or school-based special education tutors. (Regular teacher retains full responsibility for each student's program and progress. Can obtain advice, etc. from itinerant teacher.)

Regular classroom, plus special education resource room and teacher.	Regular teacher retains full responsibility. Child obtains intensive short-term remediation in resource room.
Regular classroom, plus part-time special class.	Regular teacher retains responsibility. Child may obtain long-term support in the special class.
Full-time special class.	Special Ed. teacher – full responsibility. Integration wherever appropriate.
Combination regular and special day school; no academic instruction in regular class.	Same as above.
Special day school.	Same as above.
Special boarding school or residential facility.	Same as above.
Hospital School.	Same as above.
Home-based instruction.	Same as above.

The implementation of services within the Cascade Service Delivery Model is guided by an overall philosophy. The philosophy stipulates that students are to be placed in more restrictive special education environments only as student needs warrant. It is recommended that students receive the least intrusive remediation possible to achieve academic and social gains. The Cascade Model may be entered at any point that best meets the needs of students; however, entry at or near the top of the model is recommended. A two-way movement within the model is also recommended. Students may move up or down, and in or out of the model as required.

The general philosophy of special education that overrides the Cascade Model is that special needs students are integrated as much as possible. Eventual reintegration or re-entry of students into the program from which initial failure was encountered is an on-going goal and possibility.

FI Special Education Model

Some similarities exist between the FI Remedial Model and the Cascade Service Delivery Model. Students in the FI stream are expected to receive instruction and material adjustment within the regular classroom as an initial attempt to remediate academic difficulties, and the initial adjustment of instruction and materials rests solely with the classroom teacher, as in the English stream (Messick, 1984; Pugach, 1986). When academic problems persist, the student is referred for assessment, undergoes psychoeducational testing, and placement decisions are made. The referral and assessment process is also used to invoke placement within the Cascade Model. From this point, many differences between the two remedial models become apparent.

In FI, placement decisions access a structure of services comprised of only one service, the resource room. Frequently, even resource room services are unavailable (Bruck, 1985a; 1985b; Peel Board of Education, 1986; Wiss, 1989). There is a distinct absence of teacher aides, tutors, and other special education personnel. If problems persist after resource room services have been exhausted, a highly restrictive solution takes place: the student drops out of FI and enters the English stream. Drop-out may, or may not, constitute grade retention, and may, or may not constitute special education placement in the English stream. Special education alternatives in FI are, consequently, severely truncated in comparison with the broad structure of alternatives in the English stream, and the final step in the model is exclusionary. Although no FI Remedial Model or Decision Making Model could be located in the research literature, given the consistency and predictability of the procedures described, it is believed that if such models were graphically represented they would bear a striking resemblance to those represented, respectively, in Figures 4 and 5. The FI Remedial Model is depicted in Figure 4 and the FI Decision Making Model is depicted in Figure 5.

Figure 4. FI Remedial Model (Truncated Cascade With Two Additional Options).

FI Regular Class

FI Resource Room

Drop-out: to English
Regular Classroom

Drop-out: to English
Special Education

Figure 5. French Immersion Remedial Decision Making Model

Unselected Clientele

Good performance	Poor Performance
Continue in FI	Classroom Remediation
	Refer/Assess
	Resource Room Remediation
	Regular English Classroom
	English Special Education

The philosophy that guides implementation of FI remedial decisions differs from the philosophy that operates within the English Cascade Model. Whereas students have the opportunity to move up or down, and in or out, of the Cascade Model as individual needs warrant, in FI once a student is referred there is a very high probability of dropping out of FI. This is contrary to the inclusion concept that specifies all children should have the chance to return to the regular program from which they initially failed. Therefore, rather than a relationship between referral and reintegration, there is a strong relationship between teacher referral and exclusion. Attrition statistics (see chapter one) and the data from chapter four testify to the frequency of drop-out as a result of teacher identification and referral. In all cases within the current study where referrals were made as a consequence of academic difficulty (N=33), one hundred percent of referred students dropped out of the program. This points to serious difficulties with the current remedial model and underscores the need for remedial restructuring. Whereas the release valve for students who experience academic difficulty in the English stream is special education, the release valve for difficulty in FI is the English stream.

Once transferred to the English stream, students did not re-enter FI. Cases of re-entry from the English program are virtually unknown and unreported. Whereas strict limits are imposed on the number of students that may be accommodated in English special education, there is virtually no limit to the number of students that may exit FI. In the province of Alberta, approximately 60 percent of students left FI by grade six and approximately 80 percent by grade nine (averaged from 1983 to 1991) (Alberta Education, 1990). Reasons for attrition are not provided.

The general philosophy of special education that overrides the FI Remedial Model is inferred from its remedial procedures. Implied is that if students are high functioning, or at least average functioning, they belong in FI and are accommodated by the current program structure. Conversely, it is implied that low functioning students do not belong in FI and are excluded by means of the FI Remedial Model.

Similarities and Differences Highlighted

A comparison of the English and FI Remedial Models reveals that special education services are in place within both streams of education, and both remedial models are accessed by a similar initial process: failed attempts by the classroom teacher to remediate students, followed by referral, assessment, diagnosis and placement. Once the remedial model has been accessed, students proceed along very different routes dependent upon their respective streams of education. In the English stream, extensive services for remediation are in place, opportunities for reintegration, and the chance for total reintegration into the program are retained, albeit efficacy studies suggest minimal reintegration into the regular stream of education occurs.

The FI Remedial Model, by contrast, has one special education service (if any), and the model frequently represents a one-way linear movement out of FI. It will be recalled that each of 34 students in the Unsuccessful group entered the remedial model prior to drop-out. Moreover, in 33 of 34 cases academic difficulty alone was cited as the reason for referral and, invariably, referral resulted in drop-out.

On the basis of the present data, and in conjunction with the research of Bruck (1985a; 1985b) and Hayden (1988) it would appear that the current solution to academic, emotional, and other difficulties in FI is withdrawal from the program.

The prevalence of exclusion from FI as a solution to academic difficulty is further strengthened by the assumption drawn from attrition data. Nevertheless, academic and emotional difficulties may not be solely responsible for attrition. Mobility to regions which do not offer FI, disinterest, and other reasons also impact on attrition statistics. For example, primary factors that impact on FI attrition at the secondary level are reported as: dissatisfaction with the quality of instruction, a desire to obtain higher grades by taking English courses, and the desire to enter the International Baccalaureate program (Lewis and Shapson, 1989). Some of these factors may be operating at the elementary level as well. Nevertheless, the reason for attrition within the current study points to the fact that academic difficulty primarily results in referral to a remedial model comprised of inadequate remediation, which far too quickly and inappropriately utilizes drop-out as a solution. Academic failure and exit from FI will, consequently, be termed "drop-out," while exit for other reasons will be termed "transfer" (with the exception of the specific use of these terms in the research literature).

Elementary drop-out seems to be primarily a result of academic difficulty and this drop-out is excessive. Moreover, drop-out from FI is virtually unlimited, there is little or no chance for re-entry, and the stigma of failure remains. Opportunities for reintegration and the chance for total reintegration into the FI program are relinquished. The English and FI remedial models systematically track lower functioning students. Both situations warrant concern. The magnitude of exclusion within FI is excessive by comparison, and the opportunity for special education students to reintegrate in FI is undermined by the frequency of drop-out. Consequently, the risk for failure and the inability to remediate students within the current FI Remedial Model is high.

Consequences of Special Education

Consequences of special education that affect FI students fall into three primary areas: consequences of special education in general, consequences of the FI Remedial Model in particular, and the consequence of elitism as a result of the FI model. Each area warrants consideration when proposing alternative models, and contributes to the need for a restructuring of the FI Remedial Model. Combined, the justification for restructuring is intensified.

Consequences of Special Education in General

Research has shown that once students enter special education, biased assessment, negative labelling, inappropriate programs, negative expectations and self-fulfilling prophecies result in ineffective education that is even more pronounced for minority students (Gersten &

Woodward, 1990; Rodriguez, Prieto & Rueda, 1984). Moreover, students who enter special education often remain in special education classes for the duration of their schooling; that is, special education as a remedial structure aimed at the reintegration of students into regular education has largely been concluded a failure (Doyle & LaGrasta, 1988; French & Rothman, 1990; Ivanoff, 1970; Oakes & Lipton, 1992; Reynolds, Wang & Walberg, 1987; Wang, 1989).

Special education is currently cited as a "covert tracking system," a "sorting machine," a place for "dumping" children with problems (Oakes & Lipton, 1992; Reynolds & Wang, 1983; Wang & Walberg, 1988; Yates, 1988), and a method for "social control" or "social reproduction" (Olson, 1983). Special education is, consequently, reported to maintain differentiation, rather than remediate lower functioning students to increased levels of functioning. As a result, reviews of studies have concluded that special education placements are generally ineffective (Hocutt, Martin, & McKinney, 1990; Ivanoff, 1970; Reynolds, 1990; Wang, Reynolds, & Walberg, 1990).

Special education categories have also presented the illusion of having been created to serve an "identifiable" special education student population. Implied is a known diagnosis and a known treatment (Keating, 1990; Nissman, 1981; Pugach, 1986). In reality, educational categories are elusive, indefensible, frequently contrived rather than real, negatively associated, and the methods which regulate access to special education are similarly contrived and self-serving (Algozzine & Ysseldyke, 1983; Frankenberger & Harper, 1987; Keating, 1990; McLeod, 1983; McLoughlin & Netick, 1983; Nissman, 1981; Pugach, 1986; Sattler, 1990; Strawser & Weller, 1985; Tucker, Stevens, & Ysseldyke, 1983). In many schools, "special" children (LD) have been over-identified (Gerber, 1988; Gersten & Woodward, 1990), and instances have been reported in which LD students outperformed NLD students (Wang, 1989). Instances such as these bring the traditional, categorical model and its methods into question.

The negative impact of labelling in special education also extends to negative social consequences. For example, individuals labelled learning disabled (LD) are consistently overrepresented in rejected and neglected groups by non-learning disabled (NLD) peers (Fox, 1989; Stone & La Greca, 1990), and are devalued and rated less favorably by teachers (Bursuck, 1989; Dudley-Marling, 1985), and by parents (Dudley-Marling, 1985).

Therefore, in its current state, special education could be argued to produce greater harm than good. However, it must be recalled that the intentions of special education have been honorable: to provide assistance and care to children who were developmentally and academically delayed or advanced in comparison with the "normal" student population. The needs of the majority of students were met within the context of the regular classroom; however, the needs of special education students were not always met within the traditional classroom context. The special education movement arose to address this deficiency. The means by which schools have met the needs of students; however, gave way to classification categories, which came to drive the model (better testing methods, more precise distinctions between categories, separate programs to address each category of specialization, etc.) (Keating, 1990). Special education classifications are currently questioned, the need for reform recognized, and the negative consequences realized. The following section will describe how these difficulties are exacerbated to an even greater degree in FI. The need for restructuring is now paramount.

Consequences of the FI Remedial Model

Special education in FI as outlined within the present study is exclusionary and the linear relationship between referral and exclusion profound. In the FI Remedial Model, remediation does not occur, rather exit occurs. With exit comes negative labelling, low self-esteem, loss of French skills, and other negative ramifications such as being academically further behind in English due to having received little or no formal instruction, particularly in the lower grades, which further impacts on self-esteem and a sense of failure (Bruck, 1978; 1979; 1980; Cummins, 1984; Safty, 1989). Moreover, FI transfer students experience frustration and unhappiness which is attributed to the frequent need for students to repeat a grade, the tendency to view the English stream as lower status, or as a demotion, and having to meet continued academic demands in the face of low self-esteem resulting from these failure experiences (Cummins, 1984). Negative consequences as a result of failure in FI compound the negative consequences of special education in general.

Students who fail in the English stream (movement into special education) likely remain entrenched in special education with its many associated negative consequences. Failure in FI as a result of inadequate remediation is also quite pronounced. Failure as a result of the FI Remedial Model consists of initial failure in the regular FI program, failure in the resource room, drop-out of FI and entry into the English stream which is deemed a third failure, and fourthly, placement into the English remedial model without chance for re-entry into FI, which is deemed a fifth and final failure. When students transfer to the English stream, the opportunity to reintegrate in FI is lost. Consequently, FI students who enter the FI Remedial Model also enter several steps involving failure and the percentage of students who enter this failure, or remedial cycle is excessive.

The research literature indicates that removal from FI is unwarranted and not remedially beneficial (Bruck, 1985a). Academic levels are generally maintained or performed only slightly better following drop-out (Bruck, 1985a; Safty, 1989). Therefore, no real academic gains occur as a result of exit, and one would be hard pressed to debate the advantages of exit in light of its negative consequences. Research also indicates that "bilingual and L2 [second language] immersion programmes are appropriate for children with a wide range of learning abilities and language skills" (Cummins, 1984, p. 176). "Language impaired, learning disabled, or low-IQ" (Cummins, 1984, p. 176) students should, therefore, be accommodated in FI (Bruck, 1982; 1985a; 1985b; Cummins, 1984). A restructuring of FI to facilitate accommodation of all students is recommended.

Consequence of Elitism

Elitism in FI is derived from the initial lure of advantaged families to FI (passive recruiting) and, subsequently, from the drop-out of lower functioning students from FI (systematic tracking) via the FI Remedial Model. Consequently, students who remain in FI are higher functioning and elite with respect to socioeconomic status, cognitive abilities, academic achievement, aptitude, classroom behavior, motivation and attitude toward learning (Bruck, 1985a; 1985b; Carey, 1984; Cummins, 1984; Olson, 1983). As further testimony to the elitism in FI, Olson (1983) cites "the case of one school system in which, of four French Immersion classes of twelve-year olds, all but three children went to France for two weeks at a cost of $1,700 Canadian per child" (p. 85). Olson emphasized the fact that the study was conducted in a public, rather than a private, school system and involved a situation that was "taken for granted by parents inside the French Immersion stream" (p. 85-86). As further evidence of FI elitism, Lewis and Shapson (1989) described three primary reasons secondary students left the FI program, the third of which was to enter the International Baccalaureate program.

The two primary reasons cited were dissatisfaction with the quality of instruction (44 percent), and a desire to obtain higher grades by taking English courses (33 percent). Consequently, elitism in FI exists and the process toward elitism involves the exclusion of lower functioning students and heightens the competition for students who remain in FI: students must be higher functioning to be considered "average."

The remedial model plays a key role in perpetuating FI elitism. According to Carlson (1964) and Olson (1983), goal displacement is overcome, and program success achieved, in large part by the exclusion of non-preferred students, or by the process of elitism. "Success," therefore, is described as "spurious because there is a systematic selection bias whereby French Immersion attracts the brightest and most highly motivated students" (Olson, 1983, p. 86). Given that unlimited numbers of students are excluded from FI, many initial "advantaged" students who enter FI become entrenched in the FI Remedial Model, and encounter its negative ramifications. An assumption from attrition rates is that the failure group far outnumbers the remaining "elite." Consequently, the definition for program "success" warrants re-evaluation. A model founded on the goal of individual success for all FI students would be ideal.

The negative ramifications of the FI Remedial Model demand a restructuring. The current model is inadequate. The dubious benefits and documented negative consequences of special education, the compounded negative consequences of the FI Remedial Model, the increased failure cycle perpetuated by the FI Remedial Model, the elitism and "spurious" definition of success (based on performance of an elite), and the tracking as opposed to "remediating" specific categories of special needs students make staying with the current model unjustified. The FI Remedial Model is one example of a model being inappropriately applied in a particular situation. The model exists, but is harmful to students. Consequently, the casualties of the FI program make remaining with the current model unacceptable.

Where Do We Go From Here? Solutions

Until recently, little profound reform had taken place. The Education for All Handicapped Act (1975) and the Regular Education Initiative (REI) were legislated in the United States and represented the first educational reforms since the deinstitutionalization of the 1960's (Will, 1986). The legislative changes in the United States had an impact on the Canadian scene. Nevertheless, although the response to these reforms in the English stream was slow, reform was almost non-existent in FI.

Whereas the research literature supports FI as an excellent and innovative academic and second language program (Genesee, 1987; Safty, 1989), the negative ramifications and inadequacies evident in the widespread failure experiences of FI students indicate a need for restructuring. The welfare of the child is preeminent and paramount in a restructured model.

Several models will be proposed. The ramifications of each model, the changes required to incorporate each model, and the pros and cons in making such changes will be highlighted and critically examined.

Model One: Screening

In the event that school boards, administrators, and educators do not acknowledge the need for educational reform, restructuring of the FI Remedial Model would be remote. The negative consequences and high failure rates in FI would, however, be undeniable. Consequently, the first model to consider on behalf of students would publicize the failure cycle and negative consequences inherent in the current FI Remedial Model and intervene prior to program implementation.

As a first step, the educational community would have an educational, professional and ethical obligation to make the public aware of all facts with respect to success and failure within FI and be accountable. Whereas educators are likely aware of the extensive attrition from FI (although they may be less aware of the negative impact and lack of remedial benefits derived from drop-out), the general public are likely completely unaware of these facts and professional ethics would demand that they be told. Honest disclosure would, undoubtedly, evoke consequences. One probable consequence would be the reluctance on the part of some families to select FI as an educational option. Enrolment rates might drop, and the very existence of the program might be threatened. A threat to the continuation of FI would be unfortunate (a profound understatement) given the long history and highly regarded methodology of FI (Genesee, 1987; Safty, 1988; 1989).

To counter the consequences of negative self-disclosure, positive self-disclosure would be paramount (not unlike the "stay in school" initiatives currently publicized by the English program). Occupational, economic, business, political, cognitive, personal development, and travel advantages of bilingualism (Bain, 1978; Bain & Yu, 1984; Cowan, 1991; Genesee, 1987; Lambert, 1991) could be disclosed alongside negative research results to present a holistic view of the program. The success of FI in promoting French without cost to English skills could be highlighted and the positive ramifications of bilingualism, particularly within the current political and economic Canadian climate, could be promoted. "Advantaged" groups who already seek FI for the benefits it offers to their offspring could be targeted. Public perception of the benefits of enrolment would be required to outweigh the costs, or perceived risks, for the program to continue.

The second step needed to intervene prior to program implementation is screening. Screening would reassure parents that only "qualified" students are accepted and, consequently, ensure a high probability of student success thereby reducing the risk for failure. Success could be further assured by simply raising cut-off scores. Screening would be advantageous from the school's point of view in that less able students would be prevented from entering FI, thereby facilitating goal attainment and increasing the likelihood of success for accepted students. A graphic representation of Model One, might resemble Figure 6.

Figure 6. Graphic Representation of Model One: Screening.

Disclose Negative and Positive Consequences
of French-Immersion Education

Promote FI Specifically
Among Advantaged Groups

Select Screening Criteria
and Testing Instruments

Screen Applicants
and Test Candidates

Evaluate and Monitor
Student Performance

Evaluate "Hits"
and "Misses" in
Screening Predictions

Adjust Cut-Off
Scores

Re-Evaluate

To summarize, the Screening Model is comprised of two primary phases: self-disclosure and screening. Self-disclosure would attest to the many negative and positive factors that affect FI students and contribute to a holistic view of the program. Active promotion of FI among "advantaged" families would be targeted. Screening would be implemented and cut-off scores placed high enough to assure minimal risk for failure and maximum chance for success. Evaluation and monitoring of student performance would ensue, and cut-off scores would be adjusted accordingly.

On initial examination, there appear to be several benefits to the Screening Model. Parents would be better prepared in terms of realistic expectations for student success or failure, the Screening Model would acknowledge the covert elitism in FI, the high rate of drop-out, and take steps to ensure that only elite students enter FI; consequently, reducing the extensive frustration and failure for a multitude of students. One might rationalize that many students leave FI anyway; therefore, why not accelerate the selection process and effectively eliminate the negative ramifications of the failure cycle.

Upon closer examination, difficulties with the Screening Model are evident. Criteria for success need to be determined, and screening/testing instruments established, adopted and implemented. Characteristics, or criteria, of a successful FI student do not currently exist. A rough profile could be ascertained from descriptors provided in the literature; however such criteria have not been validated. Further research would be required to validate these criteria. Moreover, screening of student characteristics would place undue emphasis on the child as solely responsible for learning and ignore additional factors in the learning process such as teacher skill and style which, among a multitude of other variables, play an equally important role in the learning process (Apter, 1982; Apter & Conoley, 1984; Johnson-Fedoruk, 1990; Jones & Jones, 1986; 1990; Messick, 1984; Paget & Nagle, 1986). Attending exclusively to child variables perpetuates the child-deficit model (see Appendix C). If several criteria deemed relevant to learning are included, the criteria themselves may become elusive and transitory, changing as the child, classroom dynamics, and teachers change. To determine the criteria for success and develop testing instruments to screen for such elusive criteria could represent a hurdle that research may or may not resolve. Assuming these obstacles are overcome, there are several other difficulties inherent within a Screening Model.

It is imperative that kindergarten age as a developmental period in which change and malleability of the child is the norm rather than the exception be recognized. Therefore, it is not feasible to perform testing as though skills were static. The preschool child's potential is not fully known at this age. Moreover, testing cannot guarantee perfect selection. The assessment technology to achieve 100 percent accuracy in testing does not exist. If a cut-off score is set to reject 80 to 90 percent of students and allow entry of the top 10 or 20 percent, screening would still unavoidably reject students who would have met with success and accept students who will not succeed.

Consequently, several problems would occur as a result of imposed screening. Screening (testing at the pre-entry level) would be falsely based on the premise that a child's potential is fully known at this early age. Screening would be falsely based on the non-malleability of the child, on the assumption that the child is solely responsible for learning, and on the premise that screening would provide 100 percent accuracy. In addition, if attrition is harmful, testing and rejection may be harmful as well, and may prove to be just as harmful as failure in the remedial cycle.

In the Screening Model, FI would be declared elitist and fully optional. Elitism would promote homogeneity which is detrimental to the understanding and acceptance of diversity among students, and to the development of teacher competence to cope with diversity (Pugach, 1986; Pugach & Lilly, 1984). Professed elitism would also threaten closure of the FI program. Screening would clearly give rise to criticisms of elitism which, once made known to the public, might have the effect of killing the program (Genesee, 1987; Wiss, 1989). Genesee (1987) warned that elitism could lead to FI for only a few, disqualification for many; hence, ill-feelings and program closure could result. The program would be criticized and perhaps ostracized for perpetuating elitism and promoting social reproduction or social control (Olson, 1983).

One line of research tried to establish predictive screening criteria and argued the existence of a left temporal lobe maturational lag as responsible for learning difficulties in the FI program (Trites, 1979; 1981; Trites & Moretti, 1986; Trites & Price, 1976). Trites & Moretti (1986) recommended screening for this developmental lag which, they argued, could predict difficulty in FI. They recommended screening out individuals who demonstrated this "dysfunction" and postponing FI until a later stage of development (after age nine) after which, they postulated, the impact of the left temporal lobe maturational lag would not be evident. A brief description of the study and its criticisms follow.

The FI sample was comprised of students referred to the Neuropsychological Laboratory of the Royal Ottawa Hospital; consequently, the sample comprised a hospital population. Students were administered a battery of tests comprised of a Wechsler Intelligence Scale, Peabody Picture Vocabulary Test, Wisconsin Motor Steadiness Battery, Frostig Visual Perceptual Battery, Illinois Test of Psycholinguistic Ability and various personality and neuropsychological tests, including the Tactile Performance Test (TPT). Results were contrasted with those of seven other student samples: three normal control groups (English in French schools, ethnic students in English schools, French in French schools) and four other problem groups (reading disabled, hyperactive, behavior and personality disordered, and minimal brain dysfunction). Poor performance on the TPT in contrast with the other problem groups led to the conclusion of a deficit in the temporal lobe region of the brain.

The TPT is a complex psychomotor task requiring the tactile (non-visual) placement of objects into a form board with one hand, the alternate hand, then both hands. Trites and Moretti (1986) claimed that the left temporal lobe region, which is language specific (whereas the right temporal lobe is non-language specific), was the area of difficulty. These claims have been largely refuted on methodological grounds and lack of evidence (Cummins, 1979; 1983; 1984). Difficulties were attributed to several factors. Age differences could have produced results as a function of developmental differences (FI students were on average eight to 14 months younger than the other groups). Performance was not attributed to right, left or both handed performance which would impact on the interpretation of results. The temporal lobe regions have many other functions attributed to them. Left hemisphere language dominance does not exist in 100 percent of the general population. Also, the TPT is not a verbal task. Its discriminative validity in the area of language must therefore be regarded as suspect. Finally, the FI sample was abnormal, and not representative of the normative FI population. This sample was not contrasted with another FI sample; therefore, we do not know whether the "deficit" can be accepted on the basis of these interpretations, whether they are shared by other FI students, or whether they are specific to the clinical sample.

Other criticisms of the Trites studies included the inappropriate reporting of results and their interpretation. For example, Cummins (1979) indicated that many academic differences reported were insignificant and the interpretation failed to take into consideration the retention of transfer students when describing the discrepancy between expected and actual performance levels. The conclusions drawn from adjusted scores are that FI students demonstrate no improvement as a result of transfer to the English stream in comparison with students who remain in the FI program and in fact "tend to drop back one grade level" (Cummins, 1979, p. 142). Cummins states that these results are opposite those reported by Trites, but concur with the evidence provided by Bruck (1985a). Bruck's findings suggest that students who remain in FI perform as well as students who transfer, yet maintain the French language and avoid the stigma of failure. Rather than transfer, Bruck recommended that students remain in FI and receive appropriate remediation.

The response by Trites (1979) to criticisms made by Cummins cited the interpretation of scores as accurate and claimed the scores provided were clearly identified as significant or insignificant. Trites claimed that insignificant scores were still important in that they duplicated a pattern evident on a prior study. He claimed the pattern was important and the tables discussed by Cummins needed to be placed within context of both studies. Trites defended his prior conclusions. Trites also claimed (as did Bruck) that FI students who remained in FI were those with higher IQ levels and a more favorable opinion of bilingualism. These, he argued, were a factor in the results. Trites stood firm in his recommendation that students should be switched out of immersion when they encounter difficulty in the FI program. Other variables in the learning process were ignored and an elitism was being promoted. After several attempts on the part of Trites to duplicate and support his findings, the effort seems to have been abandoned.

The Screening Model, consequently, presents an untenable position and is the least desirable and most offensive of the models proposed in this document. French Immersion is not intended to be elitist at present, nor should it be instituted as elitist in the future. Promoting elitism would perpetuate an error in the original model. French Immersion is a regular education program, and research has indicated that even low functioning students benefit from the program and progress at a pace and level consistent with matched students in the English stream (Bruck, 1982; 1985a; 1985b). Moreover, the bicultural nature of the country supported by the Constitution would be in direct opposition to such a model. It is unethical to provide individuals with a program intended to support a major portion of Canadian culture and then limit enrolment. Such a move would be counterproductive, especially in the current Canadian political climate. Screening would have the harmful effect of advocating the division of peoples, abilities, and cultures. The result would be a movement contrary to Canadian bicultural and multicultural unity, which would essentially represent a step backward instead of forward, and could do irrevocable harm. Discrimination, in whatever form, should not be encouraged. Parent, teacher, and child costs of screening are deemed excessive and unacceptable. An additional consequence of screening might be closure of an excellent academic program. Given the many negative and uncertain consequences of the model, the Screening Model may prove to be just as harmful to children and to the program itself, and may in fact prove to be more harmful than remaining with the current model. A more acceptable model might instead target direct modification of the current FI Remedial Model instead of intervening prior to implementation of the academic program currently in place.

Model Two: French Cascade Model

Given that the Cascade Service Delivery Model is more extensive, flexible, and may be less failure intensive than the FI Remedial Model, one might consider an incorporation of the English stream's Cascade Model to be an improvement of the FI Remedial Model. Such improvement would adopt the breadth and philosophy of the Cascade Model and include: a wide range of special education alternatives, movement up or down and in or out of the model as student needs warrant, provision of the least restrictive environment, and sustained opportunities for reintegration. A French Cascade Model would not entail an "extension" of the current FI Remedial Model, which would imply retaining all components of the existing model. Rather, two key components of the FI Remedial Model would be eliminated: transfer to the regular English stream, and transfer to English special education. Exit, as a form of remediation, would be abolished. With strong parent, educator and administrative commitment, FI students would remain in the program and receive special education services, similar to the process used in the English program. Therefore, rather than an extension of the current model, a French translation of the Cascade Model and greater equivalency between programs would be established. Model Two, consequently, represents a model of equivalency rather than of elitism.

To achieve equivalence, certain changes would be required. French-English equivalence has been articulated at the constitutional level, but operationally only lip service has been paid to the equality of these two programs. French education is secondary outside Quebec (see chapter one). Therefore, to achieve equal status, French education for Anglophones outside Quebec requires promotion (not unlike the "stay in school" initiatives publicized on behalf of the English program) and the benefits of bilingualism described. It must also be emphasized that benefits are achieved without cost to the acquisition of English skills, and that both streams of education are in fact "regular" programs and are fundamentally parallel in curricular and cognitive goals.

Equivalency would result in greater numbers of students remaining in FI and would; consequently, necessitate increased funding and staffing needs. Increased costs in FI would be offset by decreased cost demands in the English program. Fewer special needs students from FI would need to be accommodated in the English stream. Consequently, costs across both systems would essentially balance. Increased numbers of students in FI would also enhance support of the program by administrators who might otherwise consider FI an expensive venture if designed for only small numbers of elite students.

There are several benefits to adopting the French Cascade Model. Far more students would remain in FI and receive the help they need which would also lend credibility to the program. A greater number of French-English bilinguals would be created as a result of greater numbers of students remaining in FI which, in Canada's time of political strife, would benefit the nation. Finally, and more importantly, elimination of the cycle of failure inherent in the current remedial model would be eradicated.

Given certain nuances of the FI program, it is likely that certain differences would continue. One difference, selectivity at the point of program entry, would likely continue and result in continued passive recruiting, or the initial lure of advantaged families to FI (Olson, 1983). Due to initial selectivity of FI by "advantaged" families, the bottom levels of the Cascade Model may be superfluous, and not required. Students with moderate and severe special needs would likely be placed by their parents in a unilingual, rather than in a bilingual, educational program. Boarding school, hospital school, and home-based instruction would, consequently, likely not be required as an option in the French Cascade Model. Accordingly, these bottom levels are omitted from the hypothesized model. Even with equivalencies in place, as a function of passive recruiting, students who enter FI would likely continue to be relatively "disability free" in comparison with the broad range of diversity found in the English stream. Therefore, rather than being equivalent to the English Cascade Model, Model Two, even with equivalencies in place, would remain a truncated version. A representation of Model Two might, consequently, resemble Figure 7.

On immediate examination, Model Two represents key improvements over the original FI Remedial Model. Model Two would provide many services and philosophies parallel with those found in the English Cascade Model, and would eliminate exit as remediation, and thereby lessen the failure experiences of FI students. However, the French Cascade Model, although an amelioration of the current model, would retain many components of a model that continues to be flawed. The failures of the English Cascade Model would be retained in the French Cascade Model. Difficulties of the Cascade Model range from the referral decision that drives the entire process (Keating, 1990; Messick, 1984), to the poor track record of getting students out of special education, and the widely documented negative impact of special education and labelling on students. An argument against the French Cascade Model would, consequently, be that although the FI special education track record is not good, it is also not good in

Figure 7. **Graphic Representation of Model 2: FI Cascade Model**.

Regular classroom with special
materials and/or aide

As above with consultative services

As above with itinerant or school-
based special education tutors

Regular Class and Resource Room

Regular Class and Part
Time Special Class

Full Time
Special Class

English special education. According to the literature, remediation likely does not occur to any greater degree in the English program than in FI. The only difference is that the English stream retains its students and provides a cascade of special education services not available in FI. These differences, however, produce few tangible benefits for students. To adopt a French Cascade Model would likely be inadequate as well as inappropriate and would be tantamount to replacing one poor model with a less poor model. Duplicating another inadequate model may simply be "less bad."

More choices within a model that still does not address remediation and promote student success is not an ideal solution. It is inappropriate to simply jump blindly from one model to another without an empirical basis. The English Cascade Model has many shortcomings and presents a poor substitute if we are looking at ways to improve the FI Remedial Model. Therefore, Model Two is soundly rejected, albeit with less vehemence than Model One. A restructuring of the FI Remedial Model must also incorporate how to overcome the problems inherent in the English Cascade Service Delivery Model. To reiterate a radical feminist analogy: "we don't want to be equal, we want to be better."

"Reform" of the Cascade Model

The Cascade Service Delivery Model was proposed by Deno in 1970 (Deno, 1970). The model has not changed fundamentally since its inception (Alberta Education, 1986). Although the model has essentially remained intact, one reform effort added a pre-referral component to the model (Canter, 1987; Messick, 1984). Investigators found that teachers made insufficient attempts at remediation prior to accessing the Cascade Model (Canter, 1987; Keating, 1990; Messick, 1984). Consequently, once students were identified by the teacher as low functioning, little remediation at the initial stage of the Cascade Model, adjustment in classroom instruction and materials, occurred (Messick, 1984). Students proceeded immediately to the third or fourth level of the Cascade Model, became entrenched in the model, and the students' risk for failure increased. Pre-referral advocates, therefore, argued the need for teachers to implement more remedial strategies before referral to avoid student entry into the Cascade Model.

> *Only after deficiencies in the learning environment have been ruled out, by documenting that the child fails to learn under reasonable alternative instructional approaches, should the child be exposed to the risks of stigma and misclassification inherent in referral and individual assessment.* (Messick, 1984, p. 5)

Messick (1984) reported that upon examination of the remedial process by a 15-member panel, contrary to the expected implementation of remedial strategies by the classroom teacher prior to referrals to the school psychologist, the sole strategy utilized by the majority of teachers was completion of the referral form. To correct these deficiencies, the panel proposed a two-phase comprehensive assessment model. Phase-one comprised implementation and evaluation of strategies and enhancement in the quality of instruction. Continued inability to learn after necessary strategies had been put into place required that evidence be gathered by way of curriculum specific criterion-referenced tests. Only after deficiencies in the learning environment had been identified, rectified, alternatives attempted, and evidence of continued learning problems gathered, would phase-two of the process be recommended. "Failures of the educational system should be discounted first, lest they be interpreted invalidly as failures of the child" (Messick, 1984, p. 5).

The second phase of the assessment model involved individual administration of a comprehensive battery of tests: intellectual, cognitive, adaptive, and biomedical. It was hypothesized that the two-phase approach would reduce the number of special education referrals. In the English program, the referral by the teacher is reportedly the highest predictor for student placement in special education (Messick, 1984; Ysseldyke, Thurlow, Graden, Wesson, Algozzine & Deno, 1983). Once teacher referrals are initiated, there is a strong probability of placement. The tendency to place as opposed to remediate has been re-articulated in the present study. A pre-referral component would ensure that, before the Cascade Model was entered, the system itself was not at fault.

To summarize, a minor reform to the Cascade Model arose. Pre-referral recommendations comprised the only real change to the basic model. Messick's goal was to prevent as many students as possible from entering the Cascade Model. Messick (1984), consequently, recommended that teachers implement at least two strategies before referring students. Pre-referral strategies would address child skills, teacher skills, teacher style, and other elements in the learning environment which, consequently, would represent a positive move away from the widely criticized child-deficit model (Apter, 1982; Apter & Conoley, 1984; Messick, 1984; Paget & Nagle, 1986; Johnson-Fedoruk, 1990; Jones & Jones, 1986; 1990). However, the shift away from the belief that difficulties are the fault of the child may not have been far enough. Implicit are remnants of child-deficit tenets: if the problem is not within teacher style, skill, or instructional material, then the problem must, by omission, be within the child, which justifies a movement to the Cascade Model. Blame should not be perpetuated. Rather, a model that is remedially helpful and promotes shared responsibility for learning is recommended. This applies to English and FI streams of education alike.

The argument can be made that if the readiness to refer students without initial classroom remediation is prevalent in English stream classrooms, it is unlikely that teachers from other educational programs, such as FI, vary in this respect. In fact, the lack of classroom remediation and the readiness to refer students might be intensified in FI where the program is viewed as "optional."

Several obstacles to pre-referral are evident. Firstly, remediation in the past was assumed to occur behind closed classroom doors and it was found that remedial strategies were not being implemented (Messick, 1984). Pre-referral would once again rely on teachers to implement strategies prior to referrals being made, not unlike the current intent of the Cascade Model. Consequently, there is a strong likelihood that behind closed doors teachers would continue as they have for years: teaching to the middle, or homogeneous group in the classroom without modification in methods. Secondly, the safety net of traditional special education would remain. If teacher efforts fail, students enter the Cascade Model as before. Consequently, there is a very real possibility of little, if any, change occurring through adoption of pre-referral strategies. Whereas the quality and diversity of instruction might ideally improve, the difficulties of the referral-assessment-placement method would remain. Pre-referral reforms would likely have little profound impact on educational reform. Whereas Messick tried to reduce the flow of students into the Cascade Model by having teachers become more accountable to the exceptional student needs within their classrooms, the model essentially remained the same. Consequently, what is required is an empirically based, child-centered model that would move well beyond the difficulties inherent in the previous remedial models presented.

Model Three: Model of Inclusive Education

The third model proposed is derived from the "inclusive education" literature, and moves well beyond the difficulties inherent in the current FI Remedial Model and the first two alternative remedial models generated. Proponents of inclusive education acknowledge the inadequacy of special education, the fallacy of striving for homogeneous student skills, the harm inherent in segregating and categorizing students, and the necessity of an ecological perspective in the learning process (Gartner & Lipsky, 1989; Keating, 1990; Pugach, 1986; Skrtic, 1991a; 1991b; Stainback & Stainback, 1990). Inclusive education is well documented, founded on sound learner centered principles (compare with Spielberger, 1992), and puts forth an ecological rather than a child-deficit perspective.

The third model proposed is the Model of Inclusive Education. Proponents of inclusive education generally agree with the widely articulated philosophies of inclusive education in the literature; nevertheless, the methods by which inclusive education can best be implemented remain debated (Pugach, 1986; Pugach & Johnson, 1991; Will, 1986). A consensus model for the implementation of inclusive education has not yet evolved (Gersten & Woodward, 1990; Pugach & Johnson, 1991). Therefore, the model presented here is derived from many components in the research literature.

Guidelines to develop the model were derived from several components in the research literature which include: the inclusive education philosophies articulated and generally accepted by proponents of inclusive education, the recommendations in the literature to use the collaborative team approach, and the recommendations in the research literature to use multi-level instruction which is comprised of thematic units based on Bloom's taxonomy. Other influences were derived from the research provided by Bruck, Cummins, Idol and West, Keating, Messick, Olson, Pugach, Safty, Skrtic, Stainback and Stainback, and Ysseldyke. Consequently, the Model of Inclusive Education presented here, is unique, and is believed to address each of the concerns raised with respect to the FI Remedial Model.

The following section will briefly describe the historical evolution of inclusive education, the core components or fundamental philosophies articulated in the literature, and the implementation guidelines highlighted. The Model of Inclusive Education will be presented, and the teacher and student benefits of adopting an inclusive education approach in FI described.

Historical Evolution

Inclusive education evolved from normalization, or the deinstitutionalization of segregated exceptional individuals into mainstream schools (Lloyd & Gambatese, 1990; Wolfensberger, Nirje, Olshansky, Perske & Roos, 1972). Despite the normalization movement, students continued to be educated separately from mainstream students, albeit within the same school building. With the "integration" movement of the 1970's exceptional students began to move from segregated classrooms into the regular stream with educational supports and curricular adjustments (Hocutt, Martin, & McKinney, 1990). Integration efforts focused on increasing student skills in an effort to achieve parity with mainstream students. Two difficulties arose. Students rarely achieved full integration (Gartner & Lipsky, 1989; Keating, 1990) and attempts to fit students to an "ideal" educational standard perpetuated a "deficit," "categorical," or "Galtonian" model that blamed the child for the lack of educational progress (Gartner & Lipsky, 1989; Keating, 1990; Messick, 1984; Skrtic, 1991b).

With the introduction of the Regular Education Initiative (REI) in the United States, a shift in education occurred (Will, 1986). "By shifting the onus from a lack of adaptiveness in the child to a lack of adaptiveness in the setting, we can begin a close examination of the ways to design better learning environments, rather than simply demarcating presumed design flaws in the child" (Keating, 1990, p. 264). Rather than assessing, labelling, and placing students into a priori categories, a new view of education emerged which advocated a unified model of education characterized by an overall ability to handle diversity (Will, 1986). Teaching to student diversity involved a movement toward adaptive education in which variety and flexibility were paramount (Wang, in press). Higher order thinking and problem solving skills were deemed necessary to foster learning and motivation (Keating, 1990; Wang, in press). Whereas integration was originally aimed at exceptional children, inclusive education, although primarily intended for the benefit of students with exceptional needs, would provide benefit for all children.

Components of Inclusive Education

There are several core components, or fundamental philosophies, of inclusive education. One component emphasizes school and community supports that include trust, respect, high expectations, and fair policies which do not discriminate against any student (Bauwens & Hourcade, 1991; Block, 1985; Good & Weinstein, 1986; Howell, 1991; Stainback & Stainback, 1990; Walker & Bullis, 1990). A second fundamental component of inclusive education is that excellence is not sacrificed for equity. Excellence, or the reaching of one's maximum potential, is considered equally attainable for all students, and not strictly the ownership of an elite (Skrtic, 1991a; 1991b; Stainback & Stainback, 1990). Thirdly, cooperative or collaborative school environments are strongly advocated, involve a team approach to problem solving, and reduce the duplication and fragmentation of services (Edgar, 1991; Glatthorn, 1990; Gartner & Lipsky, 1989; Graden, 1989; Howell, 1991; Idol & West, 1991; Porter & Richler, 1991b; Pugach & Johnson, 1989a; 1989b; Self, Benning, Marston, & Magnusson, 1991). Fourthly, individualized learning through individual projects and in accordance with individual academic levels, rates of progress, and goal setting require a firm commitment by administrators, educators and parents to the basic tenets of individualized learning (Alberg, 1991; Biklen, 1985; Block, 1985; Perner, 1991; Self, Benning, Marston, & Magnusson, 1991; Slavin, 1990; Wang, Reynolds & Walberg, 1990; Wang & Walberg, 1988). Additional components of inclusive education include the advancement of an innovative curriculum, support services, educational models (Block, 1985; Glatthorn, 1990; Good & Weinstein, 1986; Howell, 1991) and continuous student instruction and evaluation (Self, Benning, Marston, & Magnusson, 1991; Slavin, 1990).

As a result of the efficacy research in special education and the empirically sound components of inclusive education, many researchers have called for an end to the dual track system, and predict benefits for students and teachers if general and special education are combined into a unified educational delivery system with unified support (Doyle & LaGrasta, 1988; Jolly, 1990; Pugach, 1986; Pugach & Lilly, 1984; Skrtic, 1991a; 1991b; Stainback & Stainback, 1990; Will, 1986). Traditionally, the dual track system has excluded and segregated exceptional students; consequently, it has undermined the capacity to serve all students in a holistic, unified, and supportive manner (Keating, 1990; Porter & Richler, 1991a; 1991b; Reynolds, Wang & Walberg, 1987; Skrtic, 1991a; 1991b; Will, 1986). In the past, teachers have also been largely segregated in classrooms and have often faced problems, frustrations and successes in isolation. In light of these findings, it is this writer's perspective that FI students and teachers would benefit by moving to a more inclusive model. Many school districts across Canada are currently moving to more integrated, inclusive approaches (Porter & Richler, 1991a).

Various degrees of inclusion are recommended by proponents of inclusive education. Lilly (1986), Pugach (1986) and Pugach and Lilly (1984) recommend a unified teacher training system and a unified educational delivery system for students with mild handicaps. Students with moderate and severe handicaps would remain in segregated classrooms. Wang, Reynolds, and Walberg (1989) extend inclusive education to include "most students." "Most, if not all students can be provided with instruction suited to their needs in regular classroom environments" (Wang, in press, p. 2). Gartner and Lipsky (1987; 1989) advocate the integration of students labelled as handicapped (mild to moderate) with an emphasis on the "holding power" of regular education. Stainback and Stainback (1984) argue the need for full integration of all students with necessary supports. Consequently, Skrtic (1991b) describes Lilly and Pugach's approach as "least inclusive" and Stainback and Stainback's approach as "most inclusive." It would appear that a movement toward greater inclusion, but not necessarily toward total inclusion, is recommended in the literature.

According to Skrtic (1991b), inclusion necessitates the dismantling of traditional boundaries, the coordination of multidisciplinary teams that combine existing knowledge and skills, and ultimately results in the unity of theory and practice. To achieve these ends, Skrtic (1991b) recommends "merging theory and practice in conjunction with eliminating specialization and professionalization. This will require eliminating the classroom" (p. 178). Skrtic argues that perfected and standardized methods will be avoided only by retaining the element of uncertainty, or "invention" necessary for collaboration. Granted, a novel problem would produce the least standardized teacher response; however, it is unlikely that, over time, all problems would be met with fresh novelty. Certain teacher methods would likely evolve that best meet the needs of certain students in certain situations. Therefore, a collaborative process merits implementation with the expectation that certain methodologies will likely evolve to handle certain types of diversity. The collaborative process can emerge without eliminating the classroom. Establishing an open and collaborative model and support network is the key.

Guidelines to Implement Inclusive Education

The implementation guidelines highlighted in the literature include first and foremost, the core components or fundamental philosophies presented in the previous section. In addition to these core components, two specific guidelines are also offered: collaborative support networks and multi-level instruction. A brief summary of support networks, multi-level instruction, and additional influences specific to the FI literature from chapters two and five will be presented.

A strong collaborative support network is recommended in the implementation of inclusive education (Edgar, 1991; Glatthorn, 1990; Graden, 1989; Howell, 1991; Idol & West, 1991; Porter & Richler, 1991a; 1991b; Pugach & Johnson, 1989a; 1989b). The literature suggests that support teams be comprised of school- and system-based professionals and para-professionals who collaborate equally (not hierarchically) with the goal being to aid teachers discover, create, and implement strategies to resolve a variety of student learning difficulties. Support teams might include a variety of professionals such as other teachers, special education consultants, counsellors, psychologists, doctors, speech and language pathologists, itinerant specialists, vision and hearing consultants, physiotherapists, occupational therapists, etc. Para-professionals such as teacher aides, teacher assistants, and trained volunteers also form an integral part of the support team network. Rather than teacher assistants/aides being assigned to individual students as in the past, they would be assigned to the teacher, and services would benefit the needs of the class in a variety of ways (Perner, 1991). Supports would also come from the community (parents, advisory councils, trained volunteers) and the students themselves (peer tutors, cross-age tutors, cooperative learners, circle of friends) (Murray, 1991; Stainback, Stainback, Moravec, & Jackson, 1992). Parents are perceived in the literature, and from a personal perspective, as the primary teachers of their children (Biklen, 1992). Often, the parents become the experts who instruct the professionals in the manner in which to best instruct their children and promote progress (Biklen, 1992). Input from parents in a collaborative model is vital. Peer tutoring, an often overlooked resource, is self-esteem enhancing to the helper as well as instrumental in providing assistance and friendship to the helpee. An additional advantage to using peer supports is the inherent encouragement of all students to look to one another as resource persons. Given the wide array of supports described in the literature, support networks will form an integral part of the proposed model and will include, but not be limited to, the supports outlined in Figure 8.

Proponents of inclusive education recommend the use of Bloom's Taxonomy (Bloom, 1969) and multi-level instruction to present material that is authentic, individualized, and adaptable to student diversity (Collicott, 1991; Murray, 1991). Multi-level instruction is the approach used to adapt a thematic unit to diverse levels of processing represented by Bloom's Taxonomy (Knowledge, Comprehension, Application, Analysis, Synthesis, and Evaluation). Multi-level instruction promotes individual abilities and learner style. Multi-level participation "means, for example, that while some students are reading a novel, the child with a visual impairment is listening to a taped version of the novel, while other students with lower reading vocabularies have access to a modified version or a peer reader. It means that while one student prepares a written report, another prepares a report orally or with pictures" (Murray, 1991, p. 182). Multi-level instruction may, consequently, be "one of the most useful strategies for the classroom teacher" (Murray, 1991, p. 182).

Additional influences on the model are derived from the research literature (chapters two and five), and include an incorporation of: teacher strategies, on-going problem solving, and an elimination of exit as a remedial model component, particularly in light of its negative consequences on students which have been documented in the literature.

Figure 8. **System of Supports**.

Community Involvement: Parent Advisory Council Trained Volunteers Parent input/involvement	Students: Peer Tutoring Cooperative Learning Cross-Age Tutoring Buddy System Circle of Friends
.... Teacher	....
Professionals: Teachers Administrators Special Education Consultants Psychologists, Counsellors Vision/Hearing Itinerants Speech-Language Pathologists Doctors, Physiotherapists Occupational Therapists Paraprofessionals: Teacher Assistants/Aides Trained Volunteers	Training/Professional Development: Workshops In-Services Co-Teaching Team Teaching University Training

Adapted from Collicott, 1991; Gartner & Lipsky, 1989; Murray, 1991; Pugach, 1986; Slavin, 1990; Stainback, Stainback, Moravec, & Jackson, 1992.

It is likely that flexibility, teacher competence, and student help are increased and placement outside regular education is decreased when teachers use a variety of problem solving strategies within the classroom; therefore, teacher strategies and problem solving form a major component of the model (Idol & West, 1991; Keating, 1990; Messick, 1984; Ysseldyke, Thurlow, Graden, Wesson, Algozzine & Deno, 1983). It has been established from the literature that exit from FI arises from the current FI Remedial Model (Bruck, 1985a; 1985b; Olson, 1983) and exit is an erroneous remedial solution which, when applied, produces major negative consequences

(Bruck, 1978; 1979; 1980; 1982; 1985a; Cummins, 1984; Safty, 1989). Consequently, exit is not included in the proposed Model of Inclusive Education.

To reiterate, a comprehensive Model of Inclusive Education merits development to provide a more suitable remedial model for FI students that will move well beyond the difficulties identified in the present study. While philosophical guidelines, support networks, and multi-level instruction are deemed necessary and vital parts in the implementation of inclusive education, it is also essential that aspects of FI research be incorporated into the model. A consensus model for the implementation of inclusive education in the English stream has not yet been developed. It is, therefore, no surprise that there is also no inclusive model available for implementation in FI. A comprehensive model has been created in the present study.

The Model of Inclusive Education

A radical shift in the FI Remedial Model is required. Out of regard for the welfare of children and to incorporate advances in knowledge, it would be difficult to justify continuing with the current model which is premised on the medical (child-deficit) model adhered to in the past. The Model of Inclusive Education provides this shift. Moreover, the Model of Inclusive Education moves well beyond being strictly a special education model to presenting a reconceptualization of education which requires a merger of general and special education into a unified service delivery system that is collaborative and supportive (Jolly, 1990; Keating, 1990; Pugach, 1986; Stainback & Stainback, 1990; Will, 1986).

Figure 9 is a graphic representation of the proposed Model of Inclusive Education. The model is consistent with the core components of inclusive education, and incorporates the guidelines highlighted in the literature. Consequently, Figure 9 is believed to represent a viable alternative to the present FI Remedial Model. The Model is comprised of two phases. Firstly, it is required that teachers develop, articulate and strive toward the philosophies and goals of instruction, learning, and remediation that are consistent with inclusive education. Secondly, a teacher problem solving process is entered. If problems persist, a support system is accessed through phase two of the model.

Phase One

Phase one of the Model of Inclusive Education involves teacher problem solving and decision making. Common problem solving steps which are derived from the school consultation research literature and provided by Idol and West (1991) are reiterated here. Phase one of the model requires that the teacher advocate, develop, articulate and strive toward the philosophies and goals of inclusive education. Instruction, learning, and remediation are expected to be consistent with the percepts of inclusive education. When problems arise, the specific problem is identified. The student is not considered the problem, nor segregated and transferred. Rather, the

Figure 9. **Model of Inclusive Education**.

Overriding Philosophies and Goals

Identify Problem
Explore Possible Alternatives
Choose Plan of Action
PHASE ONE
Implement
Evaluate
Follow-Up and Re-Design

Repeat process 2 to 4 (or more) times.
When teacher has exhausted all strategies:

Request Help Through
* the Support Network
Brainstorm Strategies
Which Differ From Phase One
PHASE TWO
Select a Series of Strategies
To Attempt, One at a Time
Teacher Implements on Own
Or With Assistance
Evaluate. Obtain Additional
Information (e.g. Assessment)
Follow-Up and Re-Design

* Support Network: see Figure 8.

learning process and learning outcomes are considered suspended without blame and the teacher is expected to identify the likely source of the immediate problem, brainstorm solutions, select and implement a plan of action, and evaluate that plan of action after full implementation and sufficient time have passed to determine its outcome. Follow-up to affirm continued progress or lack of progress, and a redesign of the solution if deemed necessary are integral parts of the phase-one process.

Messick (1984) recommended that at least two strategies be implemented and evaluated, and that documentation of continued poor performance be gathered by way of criterion-referenced tests. Indicated was the need for teachers to regain ownership for remediating students. Rather than remediation comprising completion of the referral form, segregation and drop-out, accountability and responsibility for each student would be retained. Consequently, the responsibility of the teacher is two or three fold greater in a model of inclusion. After two or more strategies have each been fully implemented, time allowed to fully assess and document outcomes, and all teacher strategies have been exhausted, then a call for help is justified and encouraged.

It is the teacher's responsibility to acquire strategies to engage students (Gartner & Lipsky, 1989; Messick, 1984). Failing these efforts, assistance through a collaborative support network is readily available and recommended to devise methods with which to engage students. It is the teacher's responsibility to seek out and collaborate with other professionals to try to obtain strategies that will help engage students. If a student is actively engaged in the learning process, but fails to succeed, the student may be assisted further through the use of various strategies and collaborative peer help methods which may, once again, be formulated through the collaboration of a support network.

Phase Two

If teachers have done all they can to facilitate learning, then assistance from other sources is justified and must be sought. In the Model of Inclusive Education, input from colleagues is acquired through a collaborative team approach. Hierarchical, or top-down, consultation undermines a collaborative, problem solving model and is not recommended in inclusive education (Skrtic, 1991a; 1991b; Pugach, 1986; Porter & Richler, 1991b). Equal, rather than hierarchical, input is necessary in a collaborative model.

A supportive, collaborative, and unified model would replace the divisiveness of the past (departments of education pre-training, training or in-services, special education categories, and classrooms) (Pugach, 1986). Communication and support channels would be opened as never before. Teachers would have a clear avenue to obtaining help, and the collaborative process would lead to an open discussion of difficulties across several professionals, each of whom would be working collaboratively on behalf of the child. Education professionals would come together as a single, unified, helping body.

Strategies offered as a result of professional collaboration will differ from previously tried teacher strategies. Strategies might be content related, strategy related, contain specific ideas for engagement, suggestions for modelling or interaction, and may involve direct support by students, professionals, and/or para-professionals, or indirect support through workshops, in-services, and through access to new materials. Suggestions might include instructional strategies across a variety of learning contexts (individual, small group, large group, cooperative, competitive), comprise students helping students (buddy system, peer tutoring, cross-age tutoring, circle of friends), or team teaching (with specialist teachers, coordinators, teacher-librarian, psychologist, or counsellor, etc.).

Several prioritized solutions merit discussion so that the teacher can assist in formulating solutions that are compatible with his or her pedagogical and personal style. If only one consensus solution is identified, implemented and fails the teacher is left without any alternative recourse. If several solution are identified there is greater likelihood that one will be effective. Optimally, several alternatives would be identified. Providing several solutions also implies flexibility and variability in dealing with learning challenges.

Strategies which evolve from a collaborative framework necessarily include modelling, team teaching, and co-teaching. Consequently, situations will arise in which it would be best for the teacher to implement strategies independently or with the assistance of another individual. Assistance might be in the form of direct support (e.g., with the new strategy), or indirect support (e.g., such as taking the rest of the class, or half the class while the teacher implements the strategy).

Assessment would continue to have a place in inclusive education. Assessments would provide additional information with respect to individual strengths and weaknesses, would offer additional information for strategy development, yet would not be used for placement. Assessment, for the purpose of placement, has been too strongly emphasized in traditional special education, and would be deemphasized in the Model of Inclusive Education. Rather, assessment to aid with program planning would be emphasized, and would not be restricted to within-child factors alone. Several of the pertinent multidimensional factors involved in the learning process would be assessed.

Pull-out assistance is recommended as a last resort in the literature by certain proponents of inclusive education and not at all by other proponents. Individual needs are preemptive and flexibility in meeting diverse student needs are paramount. To preserve this flexibility it is perceived by some that certain students may, on occasion, be required to receive instruction privately. In the literature it is rationalized that if student needs can more effectively be met through brief individualized sessions, then perhaps this is a route that could be pursued with the provision that such recourse is not long term nor pervasive. Also indicated are that the philosophies of a particular school system must prevail in this matter. The current Model of Inclusive Education proposed does not allow for such "loop holes." A totally inclusive philosophy is maintained. Given that FI is comprised primarily of the advantaged (Olson, 1983), it is highly likely that the pattern of receiving highly capable youngsters from advantaged families would continue and those students who have disabilities would enter a unilingual English program rather than a bilingual program. The lower incidence of disabilities might make a fully inclusive model more palatable at present, but should the incidence of student disabilities in FI increase, the fully inclusive component of the model would remain firm.

Evaluation of strategies and learning outcomes can be formal or informal and would determine whether further strategy development is necessary. Follow-up to affirm continued progress or lack of progress, and a re-design of the solutions if deemed necessary are also integral parts of the phase-two process (Idol & West, 1991).

To reiterate, the commitment of parents and administrators is insufficient to ensure the success of inclusive education. The skill and commitment of the classroom teacher are paramount. Without the support of the classroom teacher the inclusive education effort would surely fail. Teachers may be reassured that they already possess many needed skills (Collicott, 1991). However, innovative skills and approaches are also required (Collicott, 1991; Murray, 1991). "It does not require extensive training, although it does challenge teachers to rethink material previously taught....It requires time to plan new lessons and a willingness to give up the role of presenter for that of facilitator" (Collicott, 1991, p. 205).

For inclusive education to work, school personnel require an understanding of underlying principles and philosophies. Next, a methodological structure that incorporates the philosophies of the model is needed. Three factors have been connected to achieving successful integration, or inclusion: (a) "Law - a legal and legislative base, (b) Advocacy - a vision clearly articulated and effectively advanced, and (c) Innovation - creative educational practice that captures the vision and turns it into reality in classrooms and schools" (Porter & Richler, 1991a, p. 2).

There have been court cases to force inclusion in specific instances, and the vision of inclusive education has been clearly articulated, empirically supported, widely acclaimed, and advanced. A comprehensive model for the implementation of inclusive education in FI has now been offered. It is time to implement the model and embrace diversity in education.

Benefits of Inclusive Education

Benefits of adopting inclusive education extend to parents, teachers, students, and administrators, but primarily to teachers and students. School personnel, students, and parents become empowered to meet individual needs, set individual goals, and accomplish individual goals within a context of support, cooperation, and collaboration for the benefit of each and every student (Keating, 1990; Idol & West, 1991; Pugach, 1986). Increased communication between parents, education professionals, and students fosters respect, responsibility, accountability, and team playing (Porter & Richler, 1991b). Through inclusive education students would be individually challenged rather than labelled in special education, or frustrated in general education. A unified, rather than segregated, approach would imply student diversity is to be expected, not shunned and removed.

Proponents of inclusive education assert that a unified system of teacher training will erode the artificial boundaries of general and special education, eliminate the divisiveness and professional hierarchy of the dual track system, increase teacher competence, and provide a manageable perception of diversity within the classroom (Pugach, 1986; Stainback, Stainback, Moravec, & Jackson, 1992). Teacher self-confidence would, consequently, be enhanced by virtue of dealing with a wide range of exceptionalities and by receiving needed training and supports. Skill as well as job satisfaction would likely increase.

Within the Model of Inclusive Education every student would be valued equally regardless of ability, and would be expected and encouraged to achieve to his or her maximum potential within an environment of stimulation and acceptance (Skrtic, 1991a; 1991b; Stainback & Stainback, 1990). Youngsters would no longer become entrenched in the special education model. Increased self-esteem and positive social contacts would occur (Stainback, Stainback, Moravec, & Jackson, 1992). Every student would become a full, participating member of the class. The negative labelling, poor efficacy, and systematic tracking characteristic of the current FI Remedial Model, would be obsolete. Enhanced learning attitudes, team support, and renouncement of the attitude that special education students are less preferred would also be realized in a unified, collaborative system (Keating, 1990; Pugach, 1986). French Immersion students would be spared the negative consequences evident within the current FI Remedial Model. Stigma, negative self-esteem, demotion, exclusion, repeated failure, and loss of French language skills could be events of the past. The concept of failure could essentially vanish in the Model of Inclusive Education.

There are two basic areas in which the philosophical underpinnings of the model have been questioned. Firstly, there are concerns with respect to reduced time for regular students which would result in inadequate services to regular students (Gerber, 1988). Secondly, there are concerns with the perceived withdrawal of services to previously categorized students (Braaten, Kauffman, Braaten, Polsgrove, & Nelson, 1988). It is the perspective of inclusive education proponents and the perspective of this writer that if sufficient supports are brought within the boundaries of the classroom, rather than remaining outside its walls, that there would be sufficient support for all students: those students previously classified, those students who have not yet failed sufficiently to allow for such classification, and regular students. The full range of diversity within the student population could be better served without the need for implementing past procedures that can no longer be justified in terms of efficacy research. Inclusive education is not about "dumping" special education youngsters indiscriminantly back into regular classrooms without adequate supports in place. Rather, inclusive education proposes a comprehensive, intensive, individualized educational system that would more realistically be adapted to the full range of student diversity within schools (Slavin, 1990).

> *Student diversity is not a liability in a problem-solving organization; it is an asset, an enduring uncertainty, and thus the driving force behind innovation, growth of knowledge, and progress.* (Skrtic, 1991b, p. 177)

Difficulties perceived personally with respect to the implementation of the proposed model pertain primarily to two areas: general difficulties encountered with adoption of any new model, and the resistance to change at a personal level for those individuals closely involved with implementation of the model (e.g., teachers). Without a consensus model in place, or a prior track record to follow, the breaking of new ground will inevitably be difficult. This is inescapable. The resistance to change may also include perceptions of increased pressure on educators who are already under great pressure. Further resistance on the part of some teachers may arise in response to the need for other professionals, paraprofessionals, and parents to enter their classrooms. It is anticipated that once teachers realize that the purpose of additional supports within their classrooms is to assist with students problems, share student responsibility, and initiate shared resolutions rather than evaluate the teacher's competence that doors will be opened more readily to the Model of Inclusive Education.

Final Words

The philosophical framework and general guidelines offered in the literature have been incorporated into the Model of Inclusive Education. The model is empirically based, child-centered, and comprehensive.

Rueda (1989), in reference to instituting educational reform for language-minority students, indicated that reform efforts could be categorized into one of three approaches: maintenance, improvement, and restructure. Maintenance involves essentially keeping the current system intact and monitoring compliance with existing provisions and guidelines and; consequently, perpetuating the medical model. The screening model might be described as an example of maintenance. Improvement involves "attempts to augment and improve current practices without basic structural changes in the referral-assessment-placement system as a whole" (Rueda, 1989, p. 124). Perhaps the FI Cascade Model could fit within this category. Restructure of a present model is comprised of a more radical change in that it "requires basic structural changes of its fundamental operating assumptions" (Rueda, 1989, p. 125). Restructure proponents question the exclusivity of cognitive abilities in determining learning difficulties independent of context. Proponents acknowledge the "interactionist view" and advocate the rationale and benefits envisioned in "a merger of special, regular, and, by extension, bilingual education" (Rueda, 1989, p. 125).

Although the FI Remedial Model was deemed in need of restructuring and the Model of Inclusive Education was developed for this purpose, findings also revealed cited difficulties in the English stream's Cascade Service Delivery Model. The Model of Inclusive Education would appropriately be adopted within the English context as well. Consequently, the Model of Inclusive Education is also strongly recommended for the English stream.

In the English stream, adoption of inclusive education would cause an initial influx, or re-integration, of students from segregated classes to regular classes. Students would have already been identified and their numbers and presenting problems anticipated in light of this identification. The initial influx would eventually subside as segregated classes emptied. The source of students who experience academic difficulty would then gradually arise from within the regular classroom similar to the on-going process in FI.

In FI, identification of students would arise gradually from within classes as they always have. There would be no re-integration of students from special education classes, since special education classes are almost non-existent in FI. Consequently, the source of special needs students would differ between English and FI streams during the initial implementation of the Model of Inclusive Education, and would proceed along different lines until inclusive education was fully implemented. Once past the point of re-integration, the same model could run for both FI and English streams.

It has already been established that the student body in FI would still differ from that of the English stream due to the initial lure of advantaged families to FI (Olson, 1983). Consequently, there would likely continue to be fewer lower functioning students in FI. Over time FI students may likely remain higher functioning. With the closure of many, or all, special education classes, the traditional safety valve of special education would be shut off. The traditional means of coping with an unselected population of exceptional students would end. It is this writer's perception that all students, whether exceptional or not could then be kept within regular classes. Through the Model of Inclusive Education, academic goals would become attainable for all students, but especially for those previously unable to excel through traditional means. Diversity would be expected and the educational system would be designed to incorporate this expected diversity. The preferential treatment of certain students and the selected discrimination against other students would end. French Immersion attrition would subside, FI students would be spared the failure and negative consequences inherent within the current FI Remedial Model, and a fairer, less negatively consequential educational system would have been created.

In summary, inclusive education is coming and through initiatives such as REI, it is already here. Inclusive education is widely advocated and being adopted. A formal provincial integration policy, not unlike the REI of the United States, is expected in Alberta by June 1993 (Honorable Jim Dinning, Alberta Minister of Education, "Integration on a Budget" Conference, June 13, 1992). Consequently, many exceptional students will be entering mainstream classrooms and a suitable model is required. Inclusive education is both a simple and a complex model. Simply, inclusive education is comprised of students remaining in regular classrooms and receiving services. At a more complex level, inclusive education presents a radical shift in educational philosophy, implementation of services, and coordination of services. There are many benefits to adopting the Model of Inclusive Education: the child remains in the classroom, and there is no segregation, stigma, defeat, or failure. Parents will be pleased that support is offered to each student without the detriments of the past, and teachers will realize that they can enhance their instructional skills and work with many exceptionalities. The term "zeitgeist" comes to mind (spirit of the times, or movement of time that brings change). Inclusive education is here and it is time.

VI. DISCUSSION OF THE RESULTS

The discussion will begin with a brief review of the problem addressed in the study. There were two parts to this study. The data from chapter four will be compared to the research literature using the research questions as a guideline. Much of the research literature and the study's data seem to be consistent. Following a discussion of the five research questions, there will be a brief discussion of the current FI Remedial Model and the solutions suggested to replace this model. In the current FI Remedial Model, too much emphasis is placed on the child, which results in multiple negative consequences for the child. The current FI Remedial Model is inadequate and solutions are proposed. Three alternative models are generated as alternatives to the current model. Each model addresses improvements to reduce the number of "casualties" in the FI program. However, close scrutiny of the models reveals that two are also inadequate. Two models, consequently, are rejected. A third model, the Model of Inclusive Education, is advocated. Implementation of the model in FI is discussed. Finally, factors regarding the limitations of the study and implications for future research are presented.

The Problem Reiterated

The research literature consistently documents French Immersion as a highly successful and reputable academic program (Genesee, 1987; Safty, 1988; 1989). Academic and cognitive goals in FI are equivalent to those of the English stream (Alberta Education, 1987b; 1990; Genesee, 1987). The French language is learned without detriment to English skills (Cummins & Swain, 1986; Genesee, 1983; 1987; Genesee, Holobow, Lambert, Cleghorn, & Walling, 1985; Lambert & Tucker, 1972; Swain, 1975; Swain & Lapkin, 1982). Participation in FI occurs without detriment to academic achievement or cognitive development (Bain, 1978; Bain & Yu, 1984; Cummins, 1976; Diaz, 1983; Genesee, 1987; MacIsaac, 1991; Tucker & Lambert, 1975). Finally, appreciation and understanding of the French and French Canadian cultures is achieved in a FI program (Alberta Education, 1987b; Genesee, 1987). Still, certain problems remain. The problems of attrition (Alberta Education, 1989; 1990), lack of special education alternatives (Bruck, 1985a, 1985b; Peel Board of Education, 1986; Wiss, 1989), the frequent use of drop-out as remediation, and the subsequent negative impact on students remain (Bruck, 1978; 1979; 1980; Cummins, 1984; Safty, 1989).

Documented consequences of FI failure and drop-out include: negative labelling, low self-esteem, diminished academic confidence, loss of French skills, and being academically further behind in English due to having received little or no formal instruction prior to transfer (Bruck, 1978; 1979; 1980; Cummins, 1984; Safty, 1989). The frequent need to repeat a grade, the tendency to view the English stream as a demotion, and being required to meet continued academic demands in the face of low self-esteem contribute to student failure experiences (Cummins, 1984). These negative consequences are indications of a model that is incomplete, doesn't work, and needs improvement.

The readiness to use drop-out as a form of remediation is, in part, attributed to the lack of intensive special education services in FI. Whereas many special education services exist in the English stream, the FI Remedial Model is comprised of only one service, if any: the resource room (Bruck, 1985a; 1985b; Peel Board of Education, 1986; Wiss, 1989). While other factors may play a role in drop-out, the FI Remedial Model is likely the most significant factor.

Comparison of Results With Respect to the Data

The first research question dealt with the process of differentiating Successful (completed 10 years of FI) and Unsuccessful (dropped out) students using scores derived from clinical and qualitative data. An analysis of the group means would suggest that Successful and Unsuccessful students differ in verbal I.Q., nonverbal I.Q., in five cognitive processing skills, and in academic achievement. Differences also included the number of referrals, reasons for referral, help received, and the number of presenting difficulties. The Successful group was generally without reported deficits. Successful FI students had significantly higher intelligence quotients in both verbal and nonverbal domains; they consistently demonstrated higher language, verbal reasoning, memory, visual, and neurological skills; and superior academic performance was achieved in both French and English.

Consistent with the research literature, an elite group of students remained in FI after students had been in the program for at least 10 years.

Findings in this study indicate that students who experience academic difficulty are generally referred, which generally leads to drop-out. Therefore, academically weaker students are generally excluded from FI, while the more able students tend to remain in the program. In general, the data from chapter four are consistent with the research literature. Bruck (1985a; 1985b) reported that the primary factors involved in student drop-out from FI were cognitive and affective rather than academic. Cognitive-academic factors were deemed necessary, but insufficient. Hayden (1988) found the primary factor for student drop-out reported by teachers, students, and parents to be academic difficulty, specifically in the language arts area. Data from the present study would suggest that the primary factor involved in student drop-out is low academic achievement. This would support the need for a model to focus necessary supports toward students who experience academic difficulty.

The second research question dealt with teacher perceptions of high, average, and low functioning FI students from grades one to six to determine whether teacher perceptions were supported by independent test scores. Findings would suggest that when teachers perceived students as high, average, or low functioning, student scores were generally consistent with teacher perceptions. It was unclear whether teachers were truly and accurately aware of the potential abilities of their students, or whether teacher perceptions contributed to the performance of students as high, average, or low achievers. The reason that this was an important question was that identification by teachers seemed to be a predictor of outcomes and seemed sufficient to result in the child coming out of the regular classroom setting (Messick, 1984). In the English program, the referral by the teacher is reportedly the highest predictor for student placement in special education (Messick, 1984; Ysseldyke, Thurlow, Graden, Wesson, Algozzine & Deno, 1983). According to findings presented in chapter four, the same pattern has emerged in FI. According to the data, in FI, teacher identification of academic difficulty frequently leads to referral, which often means exit from the program. When FI students were placed in special education (resource room), often students did not seem to profit from this, and were subsequently placed in the English program. The research findings from the study and the literature are consistent on this point: placement, rather than remediation, almost invariably follows identification and referral.

The third research question highlighted the academic gains of high, average, and low functioning FI students across five repeated measures. Group differences and pre-post differences were analyzed. Even with the loss of a large group of low functioning students from the previous year (N=49, 34 of whom comprised the Unsuccessful group), the three groups were clearly differentiated across each of six grades and each of five repeated measures. Pre-post differences were significant across the Curriculum Based subtests, but not across the FIAT subtests. The lack of interaction pre and post on the FIAT, and the ceiling effect which was demonstrated on the Curriculum Based word identification subtest could likely be functions of the tests. The reason that this question was important was to provide further evidence for the academic gains of low functioning students in FI, and determine whether these gains differed significantly from those of high and average groups. If gains did occur, albeit at lower levels, then this would provide evidence to the claim in the literature that states gains, although lower than those of more able groups, are likely similar to those expected of low functioning students in the English stream; therefore, there would be no academic benefit to drop-out (Bruck, 1978; 1982).

The fourth research question dealt with the increased homogeneity of FI students across grades. If students became homogeneous as they progressed from grades one to six, the variances would be expected to decrease and result in a higher functioning group overall. This was not supported by the data from the study. Instead, students seemed to maintain fairly constant groupings which differed in terms of grade and level. Results continued to support three discernible levels of functioning in FI: high, average, and low. It was previously stated that 49 low functioning grade one to six students dropped out of the program in the year prior to data collection. Therefore, one of the limitations with this question was that the 49 drop-outs may have confounded the ability to answer this question. The concept of homogeneity might have been supported had data been collected prior to the loss of this group. Research question four was important to provide further evidence that it is the low functioning students who exit from FI in the elementary grades, and that FI students who remain are an elite group.

The view of progressive elitism is reported in the research literature (Olson, 1983). French Immersion is reported as serving an elite group of students, which is documented as being elite in socio-economic status (SES), aptitude, I.Q., and incidence of problems (Carey, 1984; Cummins, 1984; Olson, 1983). Although progressive homogeneity in the grade one to six sample was not supported by the data, the drop-out group was markedly lower functioning in comparison with the students who remained in FI, which could conceivably support the gradual elitism reported in the research literature. In addition, when the characteristics of students who remained in FI (Successful) were compared with the characteristics of students who dropped-out (in the first research question), findings from this study would suggest that elitism does exist in the program.

A comparison of academic means across high, average and low functioning grade one to six students also supports elitism in FI. The mean academic scores of high, average and low functioning grade one to six groups comprised stanine scores of 8,7, and 6 respectively. The mean stanine of the Successful group was 7, and the Unsuccessful group performed at significantly delayed levels which ranged primarily from academic delays of one to over two years. Findings would suggest that on average, "high functioning" FI students demonstrate excellence, "average functioning" FI students demonstrate high average performance, and "low functioning" FI students demonstrate average or better performance. The three groups are distinct and can be differentiated based on performance, but performance is not representative of the normal curve, rather there is evidence of elitism. Findings would suggest that students who remain in FI comprise an average of these students and perform at a high average level, as represented by the Successful group. Students with academic deficits are removed from FI, and an elite, higher functioning group remains. Results reported in chapter four underscore the strong link between academic difficulty, the remedial model, drop-out, and elitism in FI.

Research question five highlighted the similarities and differences between high functioning grade one to six students and Successful students, and low functioning grade one to six students and Unsuccessful students. Grade one to six high functioning students were found to be highly similar to the Successful students. Similarities were evident in: commencement of FI in Early Childhood Services (ECS), and families which were non-French speaking and non-French in origin. Similarities were also evident in: verbal I.Q., nonverbal I.Q., the low incidence of cognitive processing weaknesses, the absence of referrals for academic difficulty, and the absence of retention or aide time provided. Differences between high functioning grade one to six students and Successful students included: incidence of psychoeducational assessment, resource room assistance, and academic achievement. The high functioning group had fewer incidences of assessment and help received; however, four of the 10 students assessed in the Successful group were seen for enrichment purposes. The high functioning group also performed on average about one stanine better academically.

Unsuccessful students were found to be markedly lower functioning than the "low functioning" grade one to six students in the present study. Group similarities included: commencement of FI in ECS, origin from families which were non-French in origin and non-French speaking, and verbal and nonverbal intelligence quotients. Differences between the low group and the Unsuccessful group were evident in incidence of psychoeducational assessment, reason for assessment, remedial assistance, incidence of cognitive processing weaknesses, and French and English academic achievement. The Unsuccessful group performed at significantly delayed levels. Results would suggest that the Unsuccessful group was markedly more problematic than the low functioning grade one to six group. Based on these findings, the high functioning group resembled the Successful group; however, the low functioning group did not resemble the Unsuccessful group. Again, the loss of 49 low functioning students from the previous academic year may be a confounding factor.

With respect to the Successful group, instances arose that were contrary to expectations. Several students in the Successful group were referred for assessment, and three students achieved scores that were lower than expected in French (one received a conditional pass, and two received somewhat delayed scores). Of the 10 Successful students referred, reasons for referral included enrichment, behavioral/emotional, social/motivational, and visual perceptual concerns. Academic difficulty did not appear to be a factor in the referral of Successful students. Therefore, reason for referral indicated that the performance of the Successful group was still high, which did not detract from expectations. The three individuals who functioned lower than expected in French performed average or better in other subject areas, which resulted in at least average performance overall. Therefore, these scores could have been random fluctuations. It has also been documented that FI students are an elite group. It is, therefore, conceivable that these students may simply have been average students who achieved below average in French because they were being compared with an elite group. The process of drop-out may have contributed to these students being assigned lower stanine scores in French. It is also probable that these three students may have been lower functioning students who did not perform poorly in all areas, whose parents did not agree to drop-out as a remedial solution and, consequently, are successful examples of remaining in FI without the need for drop-out. This would suggest that a remedial model without drop-out as a component would be of benefit.

Findings of this study would suggest that Successful students and grade one to six students seem to be functioning well in FI. By contrast, Unsuccessful students did not function well. They represented the lowest academic achievers in FI, who were most in need of remediation, yet for whom remediation was inadequate. The needs of the students who dropped out were not being met by the current FI remedial model, and the lack of remedial support may have compounded their language and academic difficulties.

It has been demonstrated that although students within the Unsuccessful group have academic, I.Q., and cognitive processing deficits, that the problem does not only reside within the children. Treating the child in isolation for learning difficulties is contrary to the multidimensional factors involved in the learning process, and holds the child unduly responsible for learning. The problem extends beyond assessed child deficits to include the current FI Remedial Model. The current FI Remedial Model perpetuates discrimination against students who experience academic difficulty and plays a role in the exit of students from the program. A remedial model that includes more support for low achievers would likely decrease the tendency to use drop-out as a remedial alternative, decrease attrition statistics, and reduce the negative consequences for students.

Comparison of Results With Respect to the Models

The FI Remedial Model was found to be a truncated version of the Cascade Service Delivery Model. Current remedial alternatives are few, and the final step in the FI Remedial Model is withdrawal from the program. This is consistent with the literature. The literature has documented that FI is a lure to families with more capable children, which initially reduces the incidence of academically weaker students in FI, and further excludes academically weaker students through the referral, remedial, and drop-out process (Olson, 1983).

Bruck (1985a; 1985b) refers to students who do poorly and drop-out as transfer students. Bruck reports that taking students out of FI and placing them in the English stream does not substantially alter their level of achievement. Her findings would suggest that academic levels are generally maintained or performed only slightly better in the English program following drop-out from FI (Bruck, 1985a). Students who remain in FI despite academic difficulty perform at a level consistent with students of similar ability and skills in the English stream (Bruck, 1978). Therefore, research would suggest that drop-out is inappropriately utilized as a form of remediation. Nevertheless, drop-out continues to be used as a primary part of the current FI Remedial Model. Children are excluded from FI without having been given a chance to receive remediation through a more comprehensive remedial model.

Within the current FI Remedial Model, the blame for academic failure is placed squarely on the child. If students do not meet curricular requirements, they are referred, assessed, and removed. This procedure substantiates the existence of the child-deficit model in FI. The child as solely responsible for learning is inconsistent with how experts believe children learn. Some factors documented in the literature that impact on the learning process include: teacher skill, teacher style, learning capabilities, motivation, prior experience, classroom climate, classroom dynamics, peer relationships, parental support, and encouragement received (Apter, 1982; Apter & Conoley, 1984; Johnson-Fedoruk, 1990; Jones & Jones, 1986; 1990; Messick, 1984; Paget & Nagle, 1986). Therefore, the remedial model and the child-deficit philosophy from which the current FI Remedial Model is derived are flawed. In the current FI Remedial Model too much emphasis is placed on the child, which results in multiple negative consequences for the child, and solutions to these problems are needed.

Given the dubious benefits of drop-out and the negative consequences associated with drop-out, it seems reasonable that a restructuring take place. A holistic model is required that is consistent with the multidimensional factors involved in the learning process on the one hand, and the way in which we assess and remediate learning problems on the other. An exploration of solutions and model building with the aim of providing a remedial solution for the benefit of FI students is required.

Model Building: Solutions

In chapter five, three alternative remedial models were generated: a Screening Model, A FI Cascade Model, and a Model of Inclusive Education. Each model was deemed superior to the current FI Remedial Model in that the welfare of the child was preserved. That is, the number of FI "casualties" was reduced. The first two models were found to be inadequate and rejected. The third model was advocated. Drawbacks to the first two models will be outlined, and a brief description of the third model presented.

Drawbacks to the Screening Model resulted in this model being rejected. Drawbacks included: the difficulty of determining successful FI student characteristics from which to create test items for a screening instrument, and placing undue emphasis on within-child variables which contradicts the multidimensional variables involved in learning. Screening is also falsely based on the premise that a child's potential is fixed or fully known at an early age. There is an inability to guarantee accuracy in selection (failure and drop-out will still occur, albeit at a reduced rate), and the testing-rejection process may prove to be just as harmful to students as the testing and drop-out procedures of the current model. Through screening, elitism, or increased homogeneity in classes, would also be promoted. Increased homogeneity is reported in the research literature as detrimental to the development of teacher competence (Pugach, 1986) and detrimental to students learning to deal with diversity.

Finally, screening would likely give rise to criticisms of elitism which could threaten the very existence of the FI program itself.

Drawbacks to the FI Cascade Model involve primarily retaining the failures of the English Cascade Model. Although certain failures of the FI Remedial Model are avoided, the failures of the English Cascade Model would remain. These difficulties range from the referral decision that drives the entire remedial process (Messick, 1984; Ysseldyke, Thurlow, Graden, Wesson, Algozzine & Deno, 1983) to the poor track record of getting students out of special education (Doyle & LaGrasta, 1988; French & Rothman, 1990; Ivanoff, 1970; Oakes & Lipton, 1992; Reynolds, Wang & Walberg, 1987; Wang, 1989). Difficulties also include the negative impact of special education and labelling. Although the FI special education track record is not good, it is also not good in the English stream. A restructuring of the FI Remedial Model must not inherit the problems which already exist in the English Cascade Model.

The third model seems to place less emphasis on students, and place more emphasis on the system. It also seems to be consistent with the growing perception among professionals that inclusion seems to allow students to remain in a program and be included, rather than be segregated. The third model seems to help solve student problems in the classroom and bring support to the children, as opposed to bringing the children out of the classroom to find remedial support.

Model three is the Model of Inclusive Education and moves well beyond the difficulties inherent in the present and alternative remedial models explored. The philosophies of inclusive education are widely documented (Gartner & Lipsky, 1989; Keating, 1990; Pugach, 1986; Skrtic, 1991a; 1991b; Stainback & Stainback, 1990), founded on sound learner centred principles (compare with Spielberger, 1992), and put forth an ecological, rather than a child-deficit perspective. There is, however, no consensus model for the implementation of the widely articulated philosophies of inclusive education. Therefore, the model presented here is derived from many components in the research literature.

Guidelines to develop the model were derived from several components in the literature which include: the inclusive education philosophies articulated and generally accepted by proponents of inclusive education, the recommendations in the literature to use the collaborative team approach, and the recommendations in the research literature to use multi-level instruction which is comprised of thematic units based on Bloom's taxonomy. Other influences were derived from the research literature provided by Bruck, Cummins, Idol and West, Keating, Messick, Olson, Pugach, Safty, Skrtic, Stainback & Stainback, and Ysseldyke. Consequently, the Model of Inclusive Education presented here is unique.

Proponents of inclusive education acknowledge the inadequacy of special education, the fallacy of striving for homogeneous student skills, the harm inherent in segregating and categorizing students, and the necessity of an ecological perspective in the learning process (Gartner & Lipsky, 1989; Keating, 1990; Pugach, 1986; Skrtic, 1991a; 1991b; Stainback & Stainback, 1990). Rather than assess, categorize, and place students in a manner consistent with traditional models of remediation, which is a core component of the current FI Remedial Model and the two prior models generated, proponents of inclusive education advocate as much integration as possible. Certain proponents advocate total integration for all students (Skrtic, 1991b; Stainback and Stainback, 1984), whereas others advocate a certain amount of pull-out (Gartner & Lipsky, 1987; 1989; Lilly, 1986; Pugach, 1986; Pugach & Lilly, 1984; Wang, Reynolds, & Walberg, 1989). Therefore, maximum, although not necessarily total, integration is advocated by proponents of inclusive education in the literature.

Within the Model of Inclusive Education for FI proposed in this document, inclusion is advocated for all students. At present, a no pull-out policy could likely be maintained in FI with much less controversy than is likely in the English stream because, as has been previously explained, FI would likely continue to receive fewer students with disabilities. It is assumed, for example, that parents of multiply handicapped students would likely continue to choose a unilingual program for their children as opposed to a bilingual program as they have in the past. As an aside, it is my perspective that all students would benefit from a bilingual education regardless of disability and I would encourage parents not to dismiss this option too swiftly. The research has indicated that language disabled students, for example, perform similarly whether in FI or in the English stream. One benefit derived was having learned the French language. This is one advantage I would enthusiastically support.

Within the Model of Inclusive Education student needs would be met on an individualized basis and teacher support provided by way of a collaborative team approach which is reflective of recommendations in the literature (Edgar, 1991; Glatthorn, 1990; Graden, 1989; Howell, 1991; Idol & West, 1991; Murray, 1991; Porter & Richler, 1991a; 1991b; Pugach & Johnson, 1989a; 1989b; Stainback, Stainback, Moravec, & Jackson, 1992). An instructional approach that utilizes thematic units based on Bloom's Taxonomy and presented through multi-level instruction is also advocated by the proposed model, as recommended in the literature (Collicott, 1991; Murray, 1991). Teacher training and retraining is an on-going component of the model and a unified educational system, as opposed to the current dual track system, is advocated both in the literature (Doyle & LaGrasta, 1988; Jolly, 1990; Pugach, 1986; Pugach & Lilly, 1984; Skrtic, 1991a; 1991b; Stainback & Stainback, 1990) and in the proposed Model of Inclusive Education. It is likely that flexibility, teacher competence, and student help will be increased and placement outside regular education decreased when teachers use a variety of problem solving strategies within the classroom; therefore, teacher strategies and problem solving as recommended in the literature also form a major component of the model (Idol & West, 1991; Keating, 1990; Messick, 1984; Ysseldyke, Thurlow, Graden, Wesson, Algozzine & Deno, 1983). It has been established that exit from FI arises from the current FI Remedial Model (Bruck, 1985a; 1985b; Olson, 1983) and exit is an erroneous remedial solution which, when applied, produces major negative consequences (Bruck, 1978; 1979; 1980; 1982; 1985a; Cummins, 1984; Safty, 1989). Consequently, exit is not included in the proposed Model of Inclusive Education.

The Model of Inclusive Education is comprised of two phases. Firstly, it is required that teachers develop, articulate and strive toward the philosophies and goals of instruction, learning, and remediation that are consistent with inclusive education. The steps within phase one subsequently involve teacher problem solving and decision making. The key components of phase one include: problem identification, brainstorming solutions, selecting a plan of action, implementation, and evaluation of that plan of action after full implementation and sufficient time have passed to determine its outcome. Follow-up to confirm progress or the lack of progress, and a re-design of the solution if deemed necessary are also integral components of the phase-one process. The processes in phase one are repeated two to four (or more) times until the teacher has exhausted her personal store of strategies. If the teacher cannot succeed after expending her personal strategies, there are good grounds to ask for, and expect, support. Support is provided through phase two of the model: input from colleagues accessed through the collaborative team approach. New strategies are explored, a series of strategies are prioritized for implementation, strategies are implemented by the teacher and/or one or more of the team members, and evaluation, follow-up, and re-design follow. Input, accountability, and responsibility for the student are shared.

Although primarily intended for the benefit of special needs students, the Model of Inclusive Education would benefit all students. Skills emphasized and promoted would include: metacognitive strategies, developmental awareness, divergent thinking, creativity, and motivational emphases with particular attention paid to individual differences (Keating, 1990). Individualized learning would be the norm, excellence would be considered equally attainable for all students and would be actively pursued for each student (Keating, 1990; Stainback & Stainback, 1990; Skrtic, 1991a; 1991b).

Additional benefits of implementing the Model of Inclusive Education would include the prevention of many youngsters from becoming entrenched in the special education model with its inherent negative consequences (see chapter five), the empowerment of each student to perform to his or her maximum potential (Skrtic, 1991a, 1991b), the empowerment of teachers to meet the needs of a diverse population of students with increased pride, confidence, and competence, (Pugach, 1986; Pugach & Lilly, 1984), and the elimination of the use of drop-out as remediation in FI, which has been shown to produce multiple negative consequences for students. Assessment would still be useful to assist teachers with program planning, but would be deemphasized for placement purposes. A more holistic model would be achieved.

The Model of Inclusive Education would require that general and special education be combined. Teacher training would be combined to provide consistency with practice in the field, and the arbitrary division of general and special education would be unnecessary. Many researchers have called for an end to the dual track system and predict benefits for students and teachers if general and special education are combined into one system with unified remedial support (Doyle & LaGrasta, 1988; Jolly, 1990; Pugach, 1986; Pugach & Lilly, 1984; Skrtic, 1991a; 1991b; Stainback & Stainback, 1990; Will, 1986). A unified system would diminish the negative labelling, poor efficacy, and systematic tracking (or segregation) characteristic of the current dual track FI Remedial Model. Acceptance and individualized programs for all students would be adopted. Teacher benefits would include enhanced skills, competence and confidence required to meet the diverse needs of a heterogeneous group of students (Pugach, 1986). Enhanced teacher status, team support, and renouncement of the attitude that special education students are less preferred are advantages of a unified, collaborative system. The divisive barriers between general and special education which result in drop-out and negative student consequences would be eliminated and replaced with cooperation and collaboration.

A radical shift in the FI Remedial Model is required. Three models have been explored that would reduce the number of casualties in FI. There are grave difficulties perceived with two of the three models proposed. The third model, the Model of Inclusive Education, is advocated and many positive repercussions of adopting the model are perceived by this writer. The Model of Inclusive Education moves beyond being strictly a special education model. It is a reconceptualization of education which requires a merger of general and special education into a unified service delivery system that is collaborative and supportive. The dual track system has excluded and segregated exceptional students; consequently, it has undermined the capacity to serve all students in a holistic, unified, and supportive manner. Teachers have also been segregated in classrooms and have often faced problems, frustrations and successes largely in isolation (Skrtic, 1991a; 1991b). In light of findings, FI students would benefit by moving to a more inclusive model. Many school districts across Canada are currently moving to more integrated, inclusive approaches (Porter & Richler, 1991a).

Research coincidentally revealed that the English stream's Cascade Service Delivery Model is also deficient and in need of restructuring. The FI Remedial Model was shown to be more deficient and in greater need for restructuring than the Cascade Service Delivery Model. Nevertheless, it is believed that both FI and English streams would benefit from adoption of the Model of Inclusive Education proposed.

Difficulties With Respect to Implementation of the Model

Difficulties with respect to implementation of the Model of Inclusive Education result, in part, from the fact that it represents innovative concepts, particularly with respect to FI. Like any new model, change is always difficult to implement and would require the support of educational professionals within the FI program. This is inescapable.

The flexibility and lack of structure within the Model of Inclusive Education might be frightening to some teachers. The model does not require a child to be fit to a standard curriculum. Rather, the curriculum is adjusted to meet the needs of each individual child. For this reason the Model of Inclusive Education may be perceived as less "convenient" for teachers to implement in comparison with a standard curriculum. Nevertheless, the Model of Inclusive Education represents a necessary restructuring to achieve better educational outcomes for students.

Another difficulty of the model would be in overcoming the paranoia on the part of some teachers with respect to having other professionals in the classroom observing, helping, and collaborating. Such methods might be perceived as a threat or may intimidate some teachers. Hopefully, an openness and a sense that "we are all in this together for the benefit of children" will prevail.

Yet another difficulty specific to FI arises from the restricted availability of finding an accessible French-English bilingual collaborative team. It is recommended that the collaborative team be comprised of a variety of educational professionals and paraprofessionals which include: teachers, parents, speech-language pathologists, psychologists, counsellors, teacher aids, community volunteers, and peers. The language barrier may prevent all parents, for example, from participating equally in the classroom or as part of the collaborative team. Language may also prevent certain liaisons with professionals in the community. If unable to work within the classroom in the French language, their role may remain one of consultant (a hierarchical arrangement that is contradictory to equal collaboration). Given that in total early immersion English is often introduced in grade two or three (the maximum French program currently offered in Alberta), skills and strategies could be demonstrated in English and generalized by the teacher to French situations. Therefore, although this would pose a unique problem, this is not believed to be an insurmountable problem in the adoption of the Model of Inclusive Education.

Bicultural and Bilingual Considerations

The language issue is both personal and educational, yet also crosses social, political, and economic boundaries (Cowan, 1991; Tarnopolsky & Beaudoin, 1982). In Canada, language has become a sensitive and explosive issue that threatens to divide the nation (Cowan, 1991). Canada is uniquely a pluralistic, multicultural nation within a formally bicultural nation (Karim, 1989; Whitworth, 1977). To strive for unity and peaceful co-existence in a constitutionally bicultural country comprised of multicultural peoples requires, at a minimum, communication with the other official culture. The means for communication between cultures is shared language (eg. Genesee, 1987; Government of Alberta, 1988). In Canada, the channel of communication to French Canada is the French language.

Language and cultural maintenance are fundamental rights in Canada, particularly in the two official languages, yet these rights are economically and politically restricted (Tarnopolsky & Beaudoin, 1982). French Immersion supports a bicultural and bilingual component of Canada. Rather than be viewed as an option, FI could be viewed as a right in this bilingual country. This right should also include the right to remedial services in one's instructional language of choice. The FI program is a pivotal program in terms of Canadian biculturalism and bilingualism, and merits recognition and support accordingly.

Limitations of the Study

Sample size was limited by the availability of students, particularly at higher grade levels. Consequently, there were few subjects per cell which, in some instances, limited statistical analyses.

The FIAT and Curriculum Based tests, which were used to assess spelling, word identification, and passage comprehension, were not strong psychometrically, but were the best instruments available, and were the tests selected by the school system for use in spite of their drawbacks. The statistical characteristics of the FIAT and Curriculum Based tests were unclear, and the norm sample of the FIAT was comprised of the total available population at higher grade levels. Curriculum Based tests, for which a requirement was to be based specifically on the Alberta FI elementary curriculum, were difficult to locate and were the only ones located by this examiner. Availability of alternate tests for research purposes was markedly lacking.

Another limitation of the study was that, although data were collected at the same time period, Successful and Unsuccessful students crossed significant age and life experience boundaries. Age and life experience differences across groups may serve to limit a comparison of group results. However, there exist two distinct groups of students in FI: students who succeed, and those who fail. Consequently, it is believed that descriptions of these two groups are warranted.

Implications for Future Research

There were a number of questions answered by this study as well as a number of questions raised. The problems associated with FI drop-out warrant further study.

Remediation in FI has been shown to be inadequate. Research that more clearly establishes the role of remediation in solving some of the cited problems is recommended.

More research needs to be done in terms of the proposed Model of Inclusive Education. Further research is required to assess the implementation, impact, and efficacy of the proposed Model of Inclusive Education specific to the FI program.

The Model of Inclusive Education could be used to remedy existing problems of the English stream's Cascade Service Delivery Model as well. Therefore, research on the parallel structure of the FI and English Inclusive Education Models would also warrant study.

Research on the impact of a unified approach to teaching as it relates to changes in teacher training and the training of other school support professionals such as school psychologists would provide for an enlightening study.

Assessment and remediation of learning difficulties requires careful consideration of the multidimensional factors involved in the learning process and addressed in the model. The role of assessment as a supportive variable within the Model of Inclusive Education, as opposed to one of placement and exclusion would warrant study.

An evaluation of positive support networks and team collaboration established within the FI Model of Inclusive Education would be warranted. The methods, difficulties, and efficacy with respect to the team response to meet individual student needs would warrant study.

References

Adiv, E. (1984). An example of double immersion. *Language and Society, 12*, 30-32.

Alberg, J. (1991). Models for integration. In J. W. Lloyd, N. N. Singh, & A. C. Repp (Eds.), *The Regular Education Initiative: Alternative perspectives on concepts, issues, and models* (pp. 211-224). Illinois: Sycamore.

Alberta Education. (1979). *Six-year French program: Curriculum guide grades 7 to 12*. Alberta: Author.

Alberta Education. (1980). *Three-year French program curriculum guide*. Alberta: Author.

Alberta Education. (1986). *Learning disabilities: A resource manual for teachers*. Alberta: Author

Alberta Education. (1987a). *Implementation of French Language Education programs in Alberta secondary schools*. Alberta: Author.

Alberta Education. (1987b). *Le francais a l'elementaire: Programme d'etudes*. Alberta: Author.

Alberta Education. (1988). *Wetaskiwin school district study*. Unpublished paper. Alberta: Author.

Alberta Education. (1989). *Education in Alberta: Facts and figures*. Alberta: Author.

Alberta Education. (1990). *Information document: Immersion and Francophone programs*. Alberta: Author.

Algozzine, B., & Ysseldyke, J. E. (1983). Learning disabilities as a subset of school failure: The oversophistication of a concept. *Exceptional Children, 50*, 242-246.

Apter, S. J. (1982). *Troubled children/troubled systems*. New York: Pergamon Press.

Apter, S. J., & Conoley, J. C. (1984). *Childhood behavior disorders and emotional disturbance*. Englewood Cliffs, NJ: Prentice-Hall.

Bain, B. (1978). The cognitive flexibility claim in the bilingual and music education research tradition. *Journal of Research in Music Education, 26*, 76-81.

Bain, B., & Yu, A. (1984). The development of the body percept among working- and middle-class unilinguals and bilinguals. In M. Paradis and Y. Lebrun (Eds.), *Early bilingualism and child development*.

Bauwens, J., & Hourcade, J. (1991). Making co-teaching a mainstreaming strategy. *Preventing School Failure, 35*(4), 19-24.

Bibeau, G. (1984). No easy road to bilingualism. *Language and Society, 12*, 44-47.

Biklen, D. (1985). *Achieving the complete school: Strategies for effective mainstreaming*. New York: Teachers College Press.

Biklen, D. (1992). *Schooling without labels*. Philadelphia: Temple University Press.

Bliton, G., & Schroeder, H. J. (1986). A new future for children with substantial handicaps: The second wave of "Least Restrictive Environment." Bloomington: Indiana State Dept. of Education, Indiana University. Developmental Training Center.

Block, A. W. (1985). *Effective schools: A summary of research*. Virginia: Educational Research Service.

Bloom, B. S. (Ed.). (1969). *Taxonomy of Educational Objectives: The classification of educational goals*. New York: David McKay Company Inc.

Braaten, S., Kauffman, J. M., Braaten, B., Polsgrove, L., & Nelson, C. M. (1988). The regular education initiative: Patent medicine for behavioral disorders. *Exceptional Children, 55*(1), 21-27.

Bruck, M. (1978). The suitability of early French immersion programs for the language-disabled child. *Canadian Journal of Education, 3,* 51-72.

Bruck, M. (1979). Switching out of French immersion. *Interchange, 9,* 86-94.

Bruck, M. (1980). *Consequences of switching children out of French immersion: A pilot study*. Report submitted to the Quebec Ministry of Education.

Bruck, M. (1982). Language disabled children: Performance in an additive bilingual education program. *Applied Psycholinguistics, 3,* 45-60.

Bruck, M. (1985a). Consequences of transfer out of early French Immersion Programs. *Applied Psycholinguistics, 6*, 101-120.

Bruck, M. (1985b). Predictors of transfer out of early French immersion programs. *Applied Psycholinguistics, 6,* 39-61.

Bursuck, W. (1989). A comparison of students with learning disabilities to low achieving and higher achieving students on three dimensions of social competence. *Journal of Learning Disabilities, 22*(3), 188-194.

Canadian Press. (1990, September 15). French is dying outside Quebec, study concludes. *Edmonton Journal*, p. F10.

Canter, A. (1987, December). Pre-referral intervention programs key to quality services. *Communique* (National Association of School Psychologists), *16*(4), 26.

Carey, S. (1984). Reflections on a decade of French Immersion. *Canadian Modern Language Review, 41*(2), 246-259.

Carlson, R. O. (1964). Environmental constraints and organizational consequences: The public school and its clients. In D. E. Griffith (Ed.), *Behavioral science and educational administration, 63rd Yearbook, National Society for Study of Education, Part II* (pp. 262-276). Chicago: University of Chicago Press.

Collicott, J. (1991). Implementing multi-level instruction: Strategies for classroom teachers. In G. L. Porter, & D. Richler (Eds.), *Changing Canadian schools: Perspectives on disability and inclusion* (pp. 191 -218). Ontario: The Roeher Institute.

Collinson, V. (1989a). A *needs assessment of gifted education for French Immersion students in Canadian elementary schools*. Unpublished paper. University of Windsor, Ontario.

Collinson, V. (1989b). Future trends and challenges in French Immersion. *Canadian Modern Language Review, 45*(3), 561-566.

Cowan, P. (1991). A new constitution: Is language central? *Language and Society, 36*, p. 5-7.

Cummins, J. (1976). The influence of bilingualism on cognitive growth: A synthesis of research findings and explanatory hypotheses. *Working Papers on Bilingualism, 9*, 1-43.

Cummins, J. (1979). Should the child who is experiencing difficulties in early immersion be switched to the regular English program: A reinterpretation of Trites' data. *Canadian Modern Language Review, 36*(1), 139-143.

Cummins, J. (1983). Language proficiency, biliteracy and French Immersion. *Canadian Journal of Education, 8*(2), 117-138.

Cummins, J. (1984). *Bilingualism and special education: Issues in assessment and pedagogy*. Clevedon, Avon, England: Multilingual Matters Ltd.

Cummins, J. (1987). Psychoeducational assessment in multicultural school systems. *Canadian Journal for Exceptional Children, 3*(4), 115-117.

Cummins, J., & Swain, M. (1986). *Bilingualism in education: Aspects of theory, research and practice*. New York: Longman.

Das, J. P. (1983). Process training and remediation of reading disability: Examples of some Soviet tasks. *Mental Retardation and Developmental Disabilities Bulletin, 11*, 32-41.

Das, J. P. (1985). Remedial training for the amelioration of cognitive deficits in children. In A. F. Ashman & R. S. Laura (Eds.), *The education and training of the mentally retarded: Recent advances* (pp. 215-243). London: Croom Helm.

Dembo, M. H., & Gibson, S. (1985). Teachers' sense of efficacy: An important factor in school improvement. *Elementary School Journal, 86*, 173-184.

Deno, E. (1970). Special education as developmental capital. *Exceptional Children, 37*, 229-237.

Dolson, D. (1985). Bilingualism and scholastic performance: The literature revisited. *Journal for the National Association for Bilingual Education, 10*(1), 1-35.

Doyle, R. J., & LaGrasta, T. M. (1988). *A policy for systemwide implementation of the "Regular Education Initiative."* Massachusetts: Sharon Public Schools.

Dudley-Marling, C. (1985). The pragmatic skills of learning disabled children: A review. *Journal of Learning Disabilities, 18*(4), 193-199.

Edgar, E. (1991). Providing ongoing support and making appropriate placements: An alternative to transition planning for mildly handicapped students. *Preventing School Failure, 35*(2), 36-39.

Ekwall, E. E. (1986). *Ekwall Reading Inventory* (2nd ed.). Newton, MA: Allyn and Bacon, Inc.

Emmer, E., Evertson, C., & Anderson, L. (1980). Effective management at the beginning of the school year. *Elementary School Journal, 80,* 219-231.

Evertson, C., & Emmer, E. (1982). Effective management at the beginning of the school year in junior high school classes. *Journal of Educational Psychology, 74,*485-498.

Excerpts from premier's speech on the Constitution. (1992, January 10). *Edmonton Journal*, p. A7.

Facts of bilingualism. (1992, February 1). *Edmonton Journal*, p. A6.

Fox, C. L. (1989). Peer acceptance of learning disabled children in the regular classroom. *Exceptional Children, 56*(1), 50-59.

Frankenberger, W., & Harper, J. (1987). States' criteria and procedures for identifying learning disabled children: A comparison of 1981/82 and 1985/86 guidelines. *Journal of Learning integrated education*. Toronto: Brooks, 37-49.

French, D., & Rothman, S. (1990). Structuring schools for student success: A focus on ability grouping. Massachusetts State Dept. of Education, Quincy. B^]+(* of Research, Planning, and Evaluation.

Fuchs, D., & Fuchs, L. (1988). Evaluation of the adaptive learning environments model. *Exceptional Children, 55*(2), 115-127.

Fuchs, D., & Fuchs, L. (1990). Framing the REI debate: Abolitionists versus conservationists. In J. W. Lloyd, N. N. Singh, & A. C. Repp (Eds.), *The Regular Education Initiative: Alternative perspectives on concepts, issues, and models* (pp. 241-255). Illinois: Sycamore.

Gallant, R., & Carbon, J. (1989). The island Acadians: Courage and perseverance. *Language and Society, 26,* p. 20-21.

Gartner, A., & Lipsky, D. K. (1987). Beyond special education: Toward a quality system for all students. *Harvard Educational Review, 57*(4), 367-390.

Gartner, A., & Lipsky, D. K. (1989). *The yoke of special education: How to break it*. National Center on Education and the Economy.

Genesee, F. (1976). The suitability of Immersion grograms for all children. *Canadian Modern Language Review, 32*(5), 494-515.

Genesee, F. (1983). Bilingual education of majority-language children: The Immersion experiments in review. *Applied Psycholinguistics, 4*, 1-46.

Genesee, F., & Hamayan, E. (1980). Individual differences in second language learning. *Applied Psycholinguistics, 1*, 95-110.

Genesee, F. (1987). *Learning through two languages: Studies of immersion and bilingual education*. Cambridge, MA: Newbury House Publishers.

Gerber, M. (1988). Tolerance and technology of instruction: Implications for special education reform. *Exceptional Children, 54*(4), 309-314.

Gersten, R., & Woodward, J. (1990). Rethinking the regular education initiative: Focus on the classroom teacher. *Remedial and Special Education, 11*(3), 7-16.

Gibson, J. (1984). For any kids, it's French without tears. *Language and Society, 12*, 8-10.

Glatthorn, A. (1990). Cooperative professional development: Facilitating the growth of the special education teacher and the classroom teacher. *Remedial and Special Education, 11*(3), 29-34.

Good, R., & Weinstein, R. (1986, October). Schools make a difference: Evidence, criticisms, and new directions. *American Psychologist*, 1090-1097.

Government of Alberta. (1988). *Language education policy for Alberta*. Alberta: Author.

Graden, J. (1989). Redefining "prereferral" intervention as intervention assistance: Collaboration between general and special education. *Exceptional Children, 56*(3), 227-231.

Grant, L., & Rothenberg, J. (1986). The social enhancement of ability differences: Teacher-student interactions in first- and second-grade reading groups. *Elementary School Journal, 87*, 29-49.

Hallahan, D. P., & Kauffman, J. M. (1988). *Exceptional children: Introduction to special education*, (4th Ed.). Englewood Cliffs, New Jersey: Prentice Hall.

Halsall, N. D. (1991). *Attrition/retention of students in French immersion with particular emphasis on secondary school*. Ottawa, Ontario: Canadian Parents for French.

Hammerly, H. (1989a). French Immersion (Does it work?) and the development of the Bilingual Proficiency Report. *Canadian Modern Language Review, 45*(3), 567-578.

Hammerly, H. (1989b). *French immersion: Myths and reality*. Calgary, Alberta: Detselig Enterprises Limited.

Hammerly, H. (1991). *Fluency and accuracy: Toward balance in language teaching and learning*. Clevedon, Avon, England: Multilingual Matters.

Hammill, D. D. (1990). On defining learning disabilities: An emerging consensus. *Journal of Learning Disabilities, 23*(2), 74-84.

Harley, B. (1984). How good is their French? *Language and Society, 12*, 55-60.

Hayden, R. (1988). French Immersion drop-outs: Perspectives of parents, students and teachers. *Reading Canada Lecture, 6*(4), 222-235.

Hocutt, A., Martin, E., & McKinney, J. (1990). Historical and legal contexts of mainstreaming. In J. W. Lloyd, N. N. Singh, & A. C. Repp (Eds.), *The Regular Education Initiative: Alternative perspectives on concepts, issues, and models* (pp. 17-28). Illinois: Sycamore.

Howell, P. (1991). Taking AIM to assist middle school students with special needs. *Preventing School Failure, 35*(4), 43-47.

Idol, L., & West, J. F. (1991). Educational collaboration: A catalyst for effective schooling. *Intervention in School and Clinic, 27*, 70-78, 125.

Ivanoff, J. (May, 1970). A behavioral Approach to Special Education. *National Catholic Guidance Conference Journal, 14*(3), 173-178.

Johnson-Fedoruk, G. (1990). *An ecological approach to predicting first grade student achievement*. Unpublished doctoral dissertation, University of Alberta, Edmonton.

Jolly, D. V. (1990). Adjusting the system instead of the individual to meet student needs. Paper presented at the Rural Education Symposium of the American Council on Rural Special Education and the National Rural and Small Schools Consortium (Tucson, AZ, March 18-22, 1990).

Jones, J. (1987). Multilingual approach reflects Canadian mosaic. *Language and Society, 12*, 33-38.

Jones, V. F., & Jones, L. S. (1986). *Comprehensive classroom management: Creating positive learning environments*. Boston: Allyn & Bacon.

Jones, V. F., & Jones, L. S. (1990). *Comprehensive classroom management: Motivating and managing students* (3rd ed.). Boston: Allyn & Bacon.

Julien, R. (1991). *The French School in Alberta: An analysis of an historical and constitutional question*. Unpublished doctoral dissertation, University of Alberta, Edmonton.

Karim, K. H. (1989). Multiculturalism in public discourse. *Language and Society, 26*, 39-40.

Keating, D. P. (1990). Charting pathways to the development of expertise. *Educational Psychologist, 25*(3 & 4), 243-267.

Krashen, S. (1984). Immersion: Why it works and what it has taught us. *Language and Society, 12*, 61-64.

Lambert, W. (1991). Is that so? A matter of grey matter? *Language and Society, 34*, 5.

Lambert, W., & Tucker, G. (1972). *Bilingual education of children: The St. Lambert experiment*. Rowley, Mass.: Newbury House Publishers, Inc.

Lapkin, S. (1984). How well do Immersion students speak and write French? *Canadian Modern Language Review, 40*(5), 575-585.

Lapkin S., & Swain, M. (1984). Research update. *Language and Society, 12*, 48-54.

Lemire, H. P. (1989). *Perceptions of principals of French Immersion schools in Alberta*. Unpublished Master's Thesis, University of Alberta, Edmonton.

Lewis, C., & Shapson, S. M. (1989). Secondary French Immersion: A study of students who leave the program. *Canadian Modern Language Review, 45*(3), 539-548.

Lilly, M. S. (1986, March). The relationship between general and special education: A new face on an old issue. *Counterpoint, 6*(1), 10.

Lindsay, G. A., & Wedell, K. (1982). The early identification of educationally at risk children revisited. *Journal of Learning Disabilities, 15*, 212-217.

Lloyd, W., & Gambatese, C. (1990). Reforming the relationship between regular and special education: Background and issues. In J. W. Lloyd, N. N. Singh, & A. C. Repp (Eds.), *The Regular Education Initiative: Alternative perspectives on concepts, issues, and models* (pp. 3-16). Illinois: Sycamore.

Lyster, R. (1987). Speaking Immersion. *Canadian Modern Language Review, 43*(4), 701-717.

MacIsaac, J. (1990). The Commissioner speaks to Canadian Parents for French: Good news for the 90s. *Language and Society, 33*, 14.

MacIsaac, J. (1991). Immersion in retrospect. *Language and Society, 36*, p. 35-36.

Macmahon, K. (1987, March). *The implementation of French language education programs in Alberta secondary schools*. Research paper for Alberta Education, Program Delivery Division.

McGillivray, W. (1984). School systems make it work. *Language and Society, 12*, 26-29.

McLeod, J., (1983). Learning disability is for educators. *Journal of Learning Disabilities, 16*(1), 23-24.

McLoughlin, J. A., & Netick, A. (1983). Defining learning disabilities: A new and cooperative direction. *Journal of Learning Disabilities, 16*(1), 21-23.

Messick, S. (1984). Assessment in context: Appraising student performance in relation to instructional quality. *Educational Researcher, 13*, 3-8.

Mian, C. (1984). A "first" for a Toronto high school. *Language and Society, 12*, 11-14.

Morrison, F., & Pawley, C. (1986). *Evaluation of the second language learning (French) programs in the schools of the Ottawa and Carleton Boards of Education, Vol. 2*. Toronto, Ontario: Queen's Printer for Ontario.

Murray, M. (1991). The role of the classroom teacher. In G. L. Porter, & D. Richler, D. (Eds.), *Changing Canadian schools: Perspectives on disability and inclusion* (pp. 173-189). Ontario: The Roeher Institute.

Nissman, B. S. (1981). Answers to questions frequently asked about the Classified Student: A professional supplement. *Special Education Information Series* (booklet #5). NJ: Central Burlington County Region for Special Education.

Northern Alberta Reading Specialists' Council. (1989). *French Immersion Issues and concerns.*

Oakes, J., & Lipton, M. (1992, February). Detracking schools: Early lessons from the field. *Phi Delta Kappan*, 448-454.

Office of the Commissioner of Official Languages. (1990). *Our two official language over time*. Ontario: Author.

Olson, C. P. (1983). Inequality remade: The theory of correspondence and the context of French Immersion in Northern Ontario. *Journal of Education, 165*, 75-98.

Omaggio, A. C. (1986). *Teaching language in context: Proficiency-oriented instruction*. Boston, MA: Heinle and Heinle Publishers, Inc.

Paget, K. D., & Nagle, R. J. (1986). A conceptual model of preschool assessment. *School Psychology Review, 15,* 154-165.

Panzeri, A. (1988, April 5). So many start...but so few finish French immersion. *Edmonton Journal*, p. B1.

Patterson, C. H. (1980). *Theories of counseling and psychotherapy* (3rd ed.). New York: Harper and Row.

Pawley, C. (1985). How bilingual are French Immersion students? *Canadian Modern Language Review, 41*(5), 865-876.

Peel Board of Education. (1986, October). Parents' views on French Immersion in Peel. *Research Bulletin, 47*.

Perner, D. E. (1991). Leading the way: The role of school administrators in integration. In G. L. Porter, & D. Richler, D. (Eds.), *Changing Canadian schools: Perspectives on disability and inclusion* (pp. 155 -171). Ontario: The Roeher Institute.

Porter, G. L. (1991). The methods and resource teacher: A collaborative consultant model. In G. L. Porter, & D. Richler, D. (Eds.), *Changing Canadian schools: Perspectives on disability and inclusion* (pp. 107 -154). Ontario: The Roeher Institute.

Porter, G. L., & Richler, D. (Eds.). (1991a). *Changing Canadian schools: Perspectives on disability and inclusion*. Ontario: The Roeher Institute.

Porter, G. L., & Richler, D. (1991b). Changing special education practice: Law, advocacy and innovation. In G. L. Porter, & D. Richler, D. (Eds.), *Changing Canadian schools: Perspectives on disability and inclusion* (pp. 9-33). Ontario: The Roeher Institute.

Province of Alberta (July 6, 1988). *School Act*. Edmonton, Alberta: Queen's Printer for Alberta.

Pugach, M. (1986, April). *Special education categories as constraints on the reform of teacher education*. Paper presented at the annual meeting of the American Educational Research Association, San Francisco, CA.

Pugach, M., & Lilly, M. S. (1984). Reconceptualizing support services for classroom teachers: Implications for teacher education. *Journal of Teacher Education, 35*(5), 48-55.

Pugach, M., & Johnson, L. (1989a). Prereferral interventions: Progress, problems, and challenges. *Exceptional Children, 56*(3), 217-226.

Pugach, M., & Johnson, L. (1989b). The challenge of implementing collaboration between general and special education. *Exceptional Children, 56*(3), 232-235.

Pugach, M., & Johnson, L. (1991). Meeting diverse needs through professional peer collaboration. In W. Stainback & S. Stainback (Eds.), *Support networks for inclusive schooling: Interdependent integrated education* (pp. 23-138). Baltimore, MD: Paul H. Brookes.

Reynolds, M. C. (1990). Classification and labelling. In J. W. Lloyd, N. N. Singh, & A. C. Repp (Eds.), *The Regular Education Initiative: Alternative perspectives on concepts, issues, and models* (pp. 29-42). Illinois: Sycamore.

Reynolds, M. C., Wang, M. C. (1983). Restructuring "special" school programs: A position paper. *Policy Studies Review, 2*(1), 189-212.

Reynolds, M. C., Wang, M. C., & Walberg, H. J. (1987). The necessary restructuring of special and regular education. *Exceptional Children, 53*(5), 391-398.

Richler, D. (1991). Inclusive education as social policy. In G. L. Porter, & D. Richler, D. (Eds.), *Changing Canadian schools: Perspectives on disability and inclusion* (pp. 35-47). Ontario: The Roeher Institute.

Rodriguez, R. F., Prieto, A. G., & Rueda, R. S. (1984). Issues in bilingual/multicultural special education. *NABE Journal: Journal of the National Association for Bilingual Education, 8*(3), 55-65.

Safty, A. (1988). French immersion and the making of a bilingual society: A critical review and discussion. *Canadian Journal of Education, 13*(2), 243-262.

Safty, A. (1989). Some reflections on a decade in the French immersion classroom. *Canadian Modern Language Review, 45*(3), 549-560.

Sattler, J. M. (1982). *Assessment of children's intelligence and special abilities* (2nd ed.). Boston: Allyn & Bacon.

Sattler, J. M. (1990). *Assessment of children* (3rd ed.). San Diego, CA: Author.

Self, H., Benning, A., Marston, D., & Magnusson, D. (1991). Cooperative teaching project: A model for students at risk. *Exceptional Children, 58*(1), 26-34.

Skrtic, T. M. (1991a). *Behind special education: A critical analysis of professional culture and school organization*. Denver, CO: Love Publishing.

Skrtic, T. M. (1991b). The special education paradox: Equity as the way to excellence. *Harvard Educational Review, 61*, 148-206.

Slavin, R. (1990). General education under the regular education initiative: How must it change? *Remedial and Special Education, 11*(3), 40-50.

Sloan, T. (1989). Canadian Parents for French: Two provinces. *Language and Society, 26*, 34-36.

Sloan, T. (1991). Second-language learning: When to begin? *Language and Society, 36*, 34-35.

Spielberger, C. D. (1992, September). Learner-centered psychological principles: Guidelines for school redesign and reform (draft). *Communique*. National Association of School Psychologists, *21*(1), 15-18.

Spilka, I. (1976). Assessment of second-language performance in Immersion Programmes. *Canadian Modern Language Review, 32*(5), 543-561.

Stainback, W., & Stainback, S. (1984). A rationale for the merger of special and regular education. *Exceptional Children, 51*(2), 102-111.

Stainback, W., & Stainback, S. (1990). Facilitating peer supports and friendships. In W. C. Stainback & S. B. Stainback (Eds.), *Support Networks for inclusive schooling: Interdependent integrated education* (pp. 151-166). Baltimore, MD: Paul H. Brookes.

Stainback, W., Stainback, S., Moravec, J., & Jackson, H. J. (1992). Concerns about full inclusion: An ethnographic investigation. In R. A. Villa, J. S. Thousand, W. Stainback & S. Stainback (Eds.), *Restructuring for caring and effective education* (pp. 305-324). Baltimore, MD: Paul H. Brookes.

Stern, H. H. (1983). *Fundamental concepts of language teaching*. Oxford, London: Oxford University Press.

Stern, H. H. (1984). The immersion phenomenon. *Language and Society, 12*, 4-7.

Stone, W. L., & La Greca, A. M. (1990). The social status of children with learning disabilities: A reexamination. *Journal of Learning Disabilities, 23*(1), 32-37.

Strawser, S., & Weller, C. (1985). Use of adaptive behavior and discrepancy criteria to determine learning disabilities severity subtypes. *Journal of Learning Disabilities, 18*(4), 205-212.

Swain, M. (1976). English-speaking child + early French Immersion = Bilingual child? *Canadian Modern Language Review, 33*(2), 180-187.

Tardif, C., & Weber, S. (1987, April). *The young child's experience of French Immersion schooling*. Paper presented at the annual meeting of the American Educational Research Association, Washington, DC.

Tarnopolsky, W., & Beaudoin, G. (Eds.). (1982). *The Canadian Charter of Rights and Freedoms: Commentary*. Toronto, Ontario: Carswell Company.

Therien, M. (1989). Progress in official languages at the federal level. *Language and Society, Special Report*, p. 34-35.

Thomas, F. M. (1979). *Comparing theories of child development*. California: Wadsworth Publishing Company.

Thorndike, R. L., & Hagen, E. (1982). *Canadian Cognitive Abilities Test (CCAT)*. Scarborough, Ontario: Nelson Canada.

Thurlow, M. L., & Ysseldyke, J. E. (1979). Current assessment and decision-making practices in model LD programs. *Learning Disability Quarterly, 2*(4), 15-24.

Trites, R. (1979). A reply to Cummins. *Canadian Modern Language Review, 36*(1), 143-146

Trites, R. (1981). Primary French Immersion: Disabilities and prediction of success. *Review and Evaluation Bulletin, 2*(5), 82p.

Trites, R., & Price, M. (1976). *Learning disabilities found in association with French Immersion programming*. Toronto, Ontario: University of Ottawa Press.

Trites, R., & Moretti, P. (1986). *Assessment of readiness for primary French Immersion: Grades four and five follow-up assessment*. Research/Technical Report. Ontario Institute for Studies in Education, 190p.

Tucker, J., Stevens, L. J., & Ysseldyke, J. E. (1983). Learning disabilities: The experts speak out. *Journal of Learning Disabilities, 16*(1), 6-14.

Walker, H., & Bullis, M. (1990). Behavior disorders and the social context of regular class integration: A conceptual dilemma? In J. W. Lloyd, N. N. Singh, & A. C. Repp (Eds.), *The Regular Education Initiative: Alternative perspectives on concepts, issues, and models* (pp. 67-74). Illinois: Sycamore.

Wang, M. C. (1989). Adaptive instruction: An alternative for accommodating student diversity through the curriculum. In D. K. Lipsky & A. Gartner (Eds.), *Beyond separate education: Quality education for all* (pp. 99 -119). Baltimore, MD: Paul H. Brookes.

Wang, M. (in press). The theory and practice of adaptive education. In M. C. Wang (Ed.), *Adaptive education strategies: Building on diversity* (pp. 1-37). Baltimore, MD: Paul H. Brookes.

Wang, M. C., Reynolds, M. C., & Walberg, H. J. (Eds.) (1990). *Handbook of special education: Research and practice: Synthesis of findings*. New York: Pergamon Press.

Wang, M. C., & Walberg, H. J. (1988). Four fallacies of segregationism. *Exceptional Children, 55*(2), 128-137.

Wechsler, D. (1974). *Manual for the Wechsler Intelligence Scale for Children-Revised*. New York: Psychological Corporation.

Wesche, M., Edwards, H., & Wells, W. (1982). Foreign language aptitude and intelligence. *Applied Psycholinguistics, 3*, 127-140.

Whitworth, F. (1977). *School boards and second language instruction*. Research paper. Canadian School Trustees' Association. Ottawa: Canadian School Board Research and Development Trust.

Will, M. C. (1986). Educating children with learning problems: A shared responsibility. *Exceptional Children, 52*(5), 411-415.

Winzer, M. (1990). *Children with exceptionalities: A Canadian perspective* (2nd ed.). Ontario: Prentice-Hall.

Wiss, C. (1989). Early French immersion programs may not be suitable for every child. *Canadian Modern Language Review, 45*(3), 517-529.

Wolfensberger, W., Nirje, B., Olshansky, S., Perske, R., & Roos, P. (1972). *The principle of normalization in human services*. Toronto: National Institute on Mental Retardation.

Wong, B. Y. L. (in press). The role of regular classroom teachers in promoting strategy transfer in students with learning disabilities.

Wormeli, C. T., & Ardanaz, N. (1987). *Technical manual for the Canada French Immersion Achievement Test (Canada F. I. A. T.)*. Vancouver, B. C.: Education Clinic, University of British Columbia.

Yates, J. (1988). Demography as it affects special education. In A. A. Ortiz, & B. A. Ramirez (Eds.), *Schools and the culturally diverse exceptional student: Promising practices and future directions* (pp. 1-5). Reston, VA: Council for Exceptional Children.

Ysseldyke, J. E., Thurlow, M., Graden, J., Wesson, C., Algozzine, B., & Deno, S. (1983). Generalizations from five years of research on assessment and decision making; The University of Minnesota Institute. *Exceptional Education Quarterly, 4*, 75-93.

APPENDIX A

Psychological Assessment Services
specializing in
Educational Assessments
(403) 922-5477
(messages 477-1852)
74-52242 Rge. Rd. 223 Sherwood Park, Alberta T8C 1B2

MEMO

DATE: May 9, 1989

TO: All teachers
Grades 1 to 3 inclusive

RE: French Immersion Study

Hello once again!

To facilitate the statistical evaluation of report card grades obtained from our study sample's demographic data I must request your input regarding establishing congruency of the grading system from grades one through six.

Currently, grades one through three are on the letter grading system whereas grades four through six are on the stanine system (1 - 9).

To aid me in arriving at a congruent grading system for all grades would you please indicate below how you have rated the following letter grades according to percentages and also how you would rate them in terms of a stanine.

I thank you for your input to make this necessary transition.

GRADE	PERCENTAGE (ie. 95-100)	STANINE (1 - 9)
A+		
A		
A-		
B+		
B		
B-		
C+		
C		
C-		
D+		
D		
D-		

Best wishes!

Linda J. Keep, M.Ed.
Consulting Psychologist

APPENDIX B

Demographic Questionnaire

DATE: ______________________

NAME: ______________________

1. GENDER: Female/Male

2. DATE OF BIRTH: ______________

3. AGE: ______

4. WHEN DID YOU START FRENCH IMMERSION? K/ 1/ 2/ 3

5. PRESENT GRADE: ______________

6. EXIT GRADE: ______________

7. REMEDIATION OBTAINED: Resource Room/ Tutor/ Aide/ Retained

WHEN (GRADE LEVEL): ________

HOW LONG (e.g., 3 hrs/wk for 6 mos.): ______________

8. IS FRENCH SPOKEN AT HOME: No/ Yes

WHICH PARENT IS/SPEAKS FRENCH: Mom/ Dad/ Both/ Neither

9. MOTHER'S OCCUPATION: ________________

FATHER'S OCCUPATION: ________________

10. RECENT REPORT CARD GRADES:

RECENT REPORT CARD GRADES:	Math	_______
	French L. A.	_______
	English L. A.	_______
	Social Studies	_______
	Science	_______

11. CCAT Date ____________________

Scores ____________________

Sample Test Scores - Pretest (N=54)

	Raw Scores	Standard Scores	Percentiles
FIAT: Spelling	_______	_______	_______
Word Identification	_______	_______	_______
Passage Comprehension	_______	_______	_______

CURRICULUM BASED TESTS: Spelling _______

Word Identification _______

APPENDIX C

Child-Deficit Model

The "child-deficit model" is an adaptation of the medical or disease model (Lindsay & Wedell, 1982; Johnson-Fedoruk, 1990). The medical model stipulates that illness lies within the individual, is quantifiable, and specific. According to the child-deficit model, educational problems, like physical problems, reside exclusively within the child. While this may be true of physical illness, educational difficulties are not parallel. Educational difficulties involve variables that are vague, abstract, and "within-child" (cognitive processing skills, intelligence, cooperation, motivation, verbal reasoning, etc.), yet also include variables such as teacher skill, teacher style, parental support, external stimulation, and learning opportunity. Transitory influences such as mood, fatigue, illness, and personal difficulties also impact upon learning. To transpose the medical model developed to treat physical illness onto educational difficulties is tenuous at best. The child-deficit model has also been called a "Galtonian" or "categorical model" (Keating, 1990). "Both the scientific legitimacy and the practical effectiveness of this categorical model has come under increasingly skeptical scrutiny" (Keating, 1990, p. 249).

Abundant evidence is available to substantiate the presence of the "child-deficit model" in FI. Data were derived from the FI Remedial Model and comprised exclusively within-child variables: assessed difficulties, intelligence quotients, cognitive processing skills, and levels of academic achievement. The FI Remedial Model portrayed academic problems as exclusively within the child. The child was identified, referred, assessed, resourced, academic weaknesses were remediated through skill training exercises or, failing this, the student was placed at a level congruent with skill deficits: retained a grade, transferred into the English regular program, or transferred into English special education. Recognition, evaluation and remediation of other variables which impact upon the learning process were ignored.

Empirical evidence refutes within-child tenants. It has been acknowledged that many variables impact upon the learning process (Apter, 1982; Apter & Conoley, 1984; Messick, 1984; Paget & Nagle, 1986; Johnson-Fedoruk, 1990; Jones & Jones, 1986; 1990). Learning is not determined solely by within-child variables, but rather by a multitude of variables within both the child and the child's learning environment: teacher skills, teacher style, effective strategies, corrective feedback, classroom management, peer relationships, class size, classroom dynamics, parental support, etc. (Messick, 1984; Jones & Jones, 1986; 1990). Consequently, when within-child variables are considered to the exclusion of other variables the premise is faulty.

Academic problems may in fact reside within students, but not to the exclusion of other variables. A wide array of cognitive processing and achievement difficulties were found in the Unsuccessful group in comparison with the Successful group (intelligence, language skills, memory, visual processing skills, verbal reasoning, and academic achievement), which would support that learning problems may be due, in part, to within-child factors. The difficulty with the child-deficit model is not so much with this aspect of the model, but rather with the "exclusivity" of within-child factors. The learning environment cannot be excluded, yet to date has been excluded in academic assessment and remediation. The multidimensionality of learning must replace adherence to the child-deficit model which unjustly places blame on the student and ignores other factors involved in the learning process. The notion that the student owns the problem therefore fix or remove the student must be dispelled. For these reasons, the "child-deficit model has been criticized as incompatible with the dynamic nature of education" (Johnson-Fedoruk, 1990, p. 40).